By GENEVIEVE B. WIMSATT and JOHN T. WOODWARD

Revised Estimates of New Plant and Equipment Expenditures in the United States, 1947–69: Part I

This article presents revised OBE–SEC estimates of new plant and equipment expenditures for the years 1947–69. The major effect of the revision was to raise the rate of growth in these expenditures; the quarterly pattern of spending was not significantly affected. This was true for both manufacturing and nonmanufacturing industries.

The related data on expenditure expectations are also being revised and will be published in Part II of this article in the February issue of the SURVEY.

THIS article presents revised estimates of expenditures for new plant and equipment in the United States by private, nonagricultural business firms. The related data on expenditure expectations are also being revised and will be published in Part II of this article in the February issue of the SURVEY.

The revision covers the entire postwar period, and adjusts the annual expenditure estimates for the various industries to benchmark data from the 1958 and 1963 Censuses and to a wide range of quasi-benchmark data for these years from other sources. The effect of the revision was to increase the rate of growth in plant and equipment spending over the postwar period. The pattern of quarterly spending was little affected.

Quarterly interpolations of the revised annual data were based on sample data from the quarterly plant and equipment expenditure surveys conducted jointly by the Office of Business Economics, the Securities and Exchange Commission, and the Interstate Commerce Commission. The seasonal factors for each industry were updated.

The series on the carryover of investment projects and on starts of projects by manufacturing industries and by public utilities have been revised to the new expenditure levels and recomputed using a refined statistical technique. A full description of the data sources and the statistical procedures appears in the Technical Notes at the end of this article.[1]

Investment pattern little changed

Although the revision had the effect of raising the average annual growth rate of expenditures for new plant and equipment in the postwar period from 5.8 percent to 6.4 percent, the general pattern of quarterly investment behavior is not markedly affected (see chart 16).

Both manufacturing and nonmanufacturing show a higher rate of growth during the 1947–69 period in the new series than in the old, but neither shows much change in its pattern of investment behavior. Expenditures for new plant and equipment grew at an annual average rate of somewhat less than 6½ percent, in the period under review, in both manufacturing and nonmanufacturing. In the previous series, the rate of growth for both sectors was slightly under 6 percent.

In manufacturing, the expansion was stronger for durable goods industries, which had a trend rise of 8 percent per annum; spending by nondurable goods industries rose an average of about 5 percent per annum. In durable goods, the expansion was paced by instruments, aircraft, and machinery companies. Among nondurable goods industries, rubber and paper companies showed the largest advances. Among the nonmanufacturing industries, public utilities, communications, and airlines led the expansion.

There are minor differences between the revised and previous series in the behavior of the all-industry aggregate at two turning points. The 1957 peak is no longer clearly in the third quarter. In the new series, spending in the second quarter is fractionally higher than in the third quarter for both manufacturing and nonmanufacturing. The 1961 low now occurs in the first quarter instead of the second quarter, with the shift attributable to revisions in the nonmanufacturing industries.

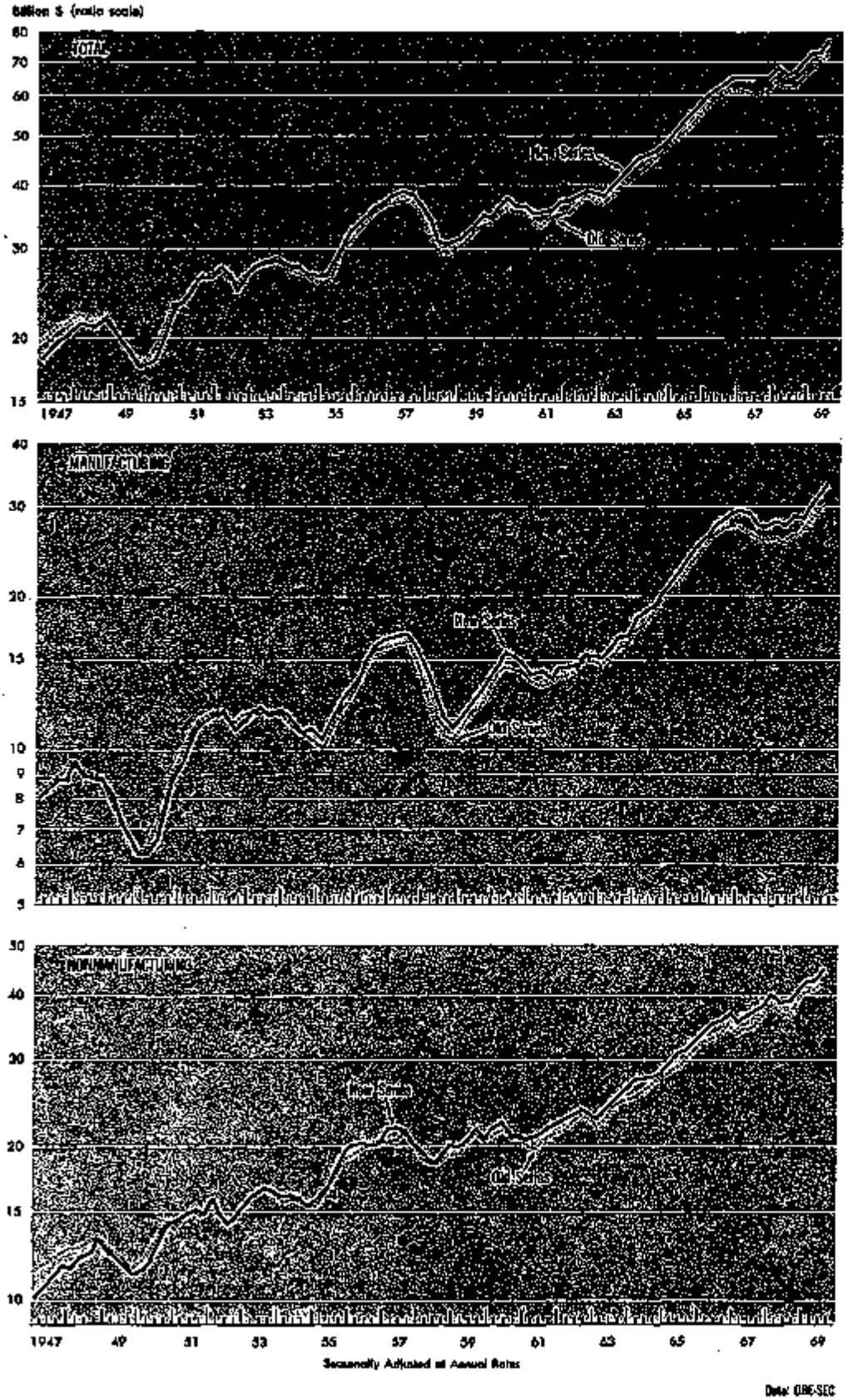
Chart 17 compares the OBE–SEC capital expenditure series with the "nonresidential fixed investment" component of gross national product. Agricultural outlays have been excluded from the latter series to improve its comparability with the OBE–SEC expenditure series. However, the two series differ in several other matters of concept and methodology (described in the Technical Notes). In spite of these differences, the pattern of growth over the period from 1947 to 1969 is similar; the average annual rate of growth for the GNP fixed investment series is 7.1 percent compared with 6.4 percent for the OBE–SEC series. The revisions have had the effect of narrowing the divergence in movement between the OBE–SEC and the GNP series.

NOTE. Miss Wimsatt is Chief, Investment Branch of OBE's Business Structure Division. Mr. Woodward is Chief, Branch of Financial Reports of the SEC's Office of Policy Research.

1. The series on manufacturers' evaluation of their capacity needs is not affected by the revision in the expenditures data.

CHART 16

Expenditures for New Plant and Equipment



Data: OBE-SEC

U.S. Department of Commerce, Office of Business Economics

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Size of revision

Chart 16 depicts the revised and previous estimates quarterly from 1947 to date. The revision lowered the all-industry aggregate for 1947 from $20.6 billion to $19.3 billion. This difference gradually disappears over the next 6 years and the revised series is higher than the old in all periods subsequent to 1953. The new estimates place expenditures in 1969 at $75.3 billion, about $4 billion or 6 percent above the previous figure.

As can be seen in the two lower panels of the chart, the pattern of revision for both manufacturing and nonmanufacturing industries is similar to that for the all-industry aggregate: downward revisions in the late 40's, more rapid growth over the span of the two decades, and upward revisions of about 6 percent in 1969.

Manufacturers' capital expenditures in 1969 are now estimated at $31.7 billion, or $2 billion above the previous estimate. Two-thirds of the upward revision occurred in the nondurable goods manufacturing group. For all years from 1958 forward, the increase in levels of manufacturers' plant and equipment expenditures was preponderently in nondurable goods manufacturing. The food, petroleum, and rubber industries were the principal ones for which the previous series had understated the amount of capital investment during the past decade. Expenditures by textile producers are substantially lower in the new series than in the old, and by paper producers somewhat lower.

The revised estimates of 1969 expenditures of the machinery industries are about one-sixth higher than the estimate in the previous series. The bulk of this increase appears in the electrical machinery group, in part reflecting the change in definition of this industry in the *Standard Industrial Classification Manual, 1957*, which was not fully taken into account in the old series. Expenditures by the nonferrous metals and stone, clay, and glass industries in 1969 are about one-fifth above previous estimates. However, for the iron and steel, motor vehicles, and miscellaneous durable goods industries the revisions have reduced 1969 expenditures.

Among the nonmanufacturing industries, revised capital spending by the communications industry is about 7 percent higher than in the old series in each of the years from 1958 to 1969. Railroad expenditures are 14 percent larger in both 1958 and 1963 and 22 percent higher in 1969.

Estimates for some nonmanufacturing industries have been revised downward. Expenditures by public utility companies for the 1958–1969 period are now estimated to be about 10 percent lower, with reductions in both the electric and gas components. The new figures for capital investment by nonrail transportation companies are also lower in 1958 and in very recent years but higher than the previous figures from 1959 to 1965.

Statistically, the least reliable estimates of capital expenditures in both the new and old series are for the "commercial and other" group. This heterogeneous group comprises the retail and wholesale trade, services, construction, finance, and insurance industries. Whereas few comprehensive data relating to fixed investment were available, except for 1948, for use in the previous series, some newly developed data sources—e.g., Board of Governors of the Federal Reserve System, the Federal Deposit Insurance Corporation, the Bureau of the Census—have permitted the preparation of acceptable estimates of expenditures for selected periods, particularly 1958 and 1963. The new data indicate that the previous estimates for retail trade were considerably too high throughout the whole period, while those for all the other component industries were to an increasing degree too low in the fifties and sixties.

The net result of the revision was a reduction of 17 percent in the estimate of expenditures by the "commercial and other" group in 1947, the elimination by 1955 of this divergence between the old and the new series, and progressively larger upward revisions in subsequent years.

Coverage and concepts

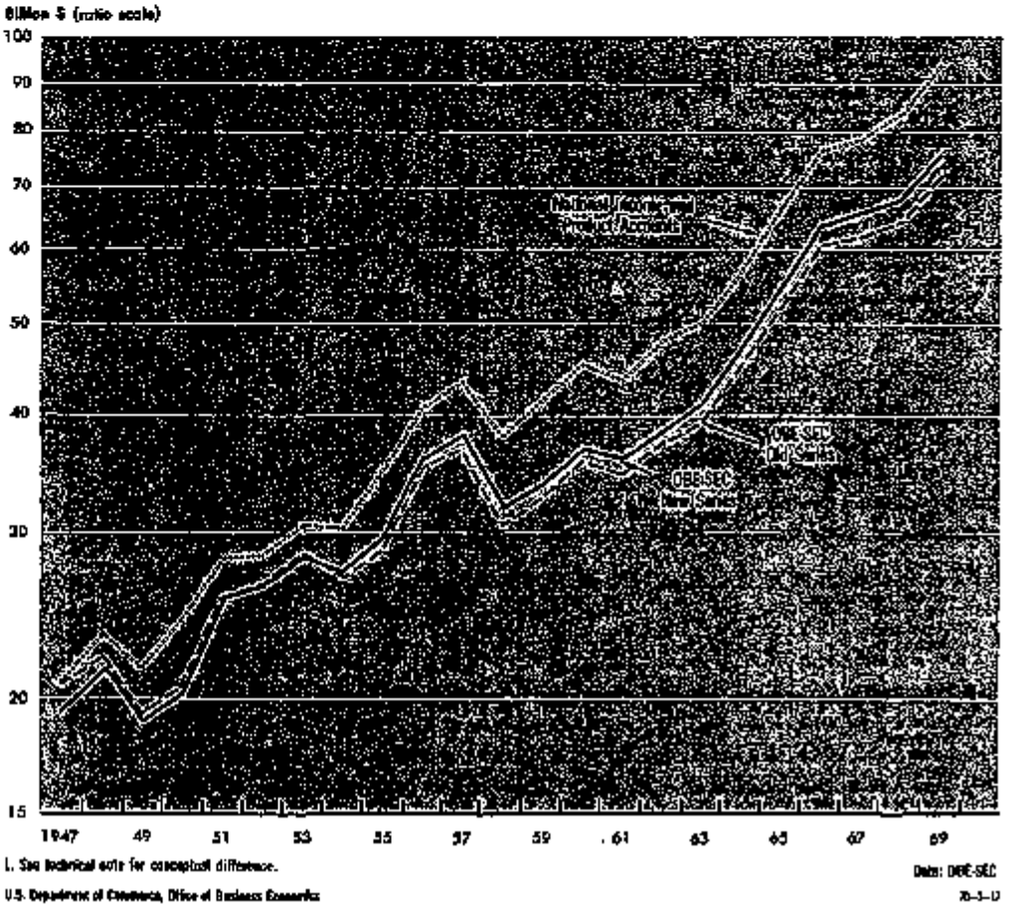
The OBE–SEC capital expenditures series covers all private nonagricultural business except real estate operators, professional services, and nonprofit organizations. The estimates are based on company data (generally on a fully consolidated basis) rather than establishment data. Each company is given an industry classification on the basis of its primary activity, utilizing the Standard Industrial Classification system. The company's total capital expenditures—for its primary activity as well as for all its secondary activities—are included in the specified industry's expenditures.

Thus in the OBE–SEC series, as compared with a series based on establishment data, there is a significantly greater chance for expenditures in one industry to be included in a different industry's total. An indication of the difference between estimates based on company data and those based on establishment data is afforded by comparing manufacturing expenditures on the two bases in 1963. Manufacturing expenditures on a company basis include expenditures for included companies' nonmanufacturing subsidiaries but exclude expenditures by manufacturing subsidiaries of nonmanufacturing companies. Manufacturing companies' capital expenditures in 1963 exceeded expenditures by manufacturing establishments by 46 percent, or $5.1 billion, according to the 1963 Census of Manufactures. Almost 60 percent of this difference occurred in petroleum refining, with the machinery, food, chemicals, and motor vehicles industries accounting for most of the remainder.

It is worthy of note that while investment by real estate firms is specifically excluded from the OBE–SEC series, investments in real estate—such as office buildings, warehouses, apartments, stores—by companies classified in cov-

CHART 17

Nonfarm, Nonresidential Fixed Investment: National Income and Product Accounts and OBE-SEC Series [1]



1. See technical note for conceptual difference.

Data: OBE-SEC

U.S. Department of Commerce, Office of Business Economics

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ered industries are included in the OBE–SEC figures for the relevant industry.

Capital outlays in the OBE–SEC series are defined as expenditures for plant and for types of machinery and equipment for which companies maintain depreciation accounts. The expenditures exclude purchases of capital goods charged to current account. Expenditures for land, for used plant or equipment, and for facilities to be installed outside the United States are also excluded. The handling of leased equipment is discussed below.

Expenditures are generally reported at the time that payment is made to the supplier or costs due to force account work are incurred. On long-term projects, progress payments are usually made during the period of construction or production, rather than a total payment on completion. Practice varies among companies with respect to handling trade-ins. If the supplier takes in a used item in trade—as is often the case for automobiles and trucks—and the actual payment is net of the trade-in, the net amount is usually reported. If the item being replaced is sold in a separate transaction, the gross cost of the new item is typically reported.

The series—with a few exceptions noted below—are on an ownership rather than a use basis. Expenditures are included in the industry category of the firm making the purchase and retaining title to the plant or the equipment purchased, even though some of these facilities are destined for use by firms in other industries.

Exceptions to the ownership basis occur in airlines and railroads. In the survey reports by the airlines, most companies include outlays for aircraft obtained through leasing or other contractual arrangements. Separate data were available to adjust the reported figures for those airlines that do not report leased equipment. Thus the estimates of airline capital outlays include the total value of all leased aircraft and are therefore essentially on a use rather than an ownership basis. Where information was obtainable on specific leasing of railroad equipment such transactions were included in the railroad figures rather than in the industry holding title to the equipment. Most of the equipment leased by the airlines and the railroads is owned by manufacturers, banks, and insurance companies.

In the case of capital expenditures by several large companies that are engaged both in manufacturing and in public utility services, data were available to allocate expenditures between the two types of operations. The manufacturing operations in question are in the electrical machinery and petroleum industries.

Expenditures for New Plant and Equipment by Legal Form of Organization, 1962 and 1963

[Billions of dollars]

	1962			1963		
	Total	Corporate	Noncorporate	Total	Corporate	Noncorporate
All industries	46.77	30.42	4.35	51.09	37.64	4.26
Manufacturing industries	15.42	15.64	.59	15.38	11.78	.60
Durable goods industries	7.53	7.24	.29	8.61	5.29	.32
Primary metal	1.51	1.69	.01	1.56	1.55	.01
Blast furnace and steel works	.88	.88	(*)	.99	.99	(*)
Nonferrous metal	.66	.66	(*)	.46	.46	(*)
Other primary metal	.16	.16	(*)	.09	.09	(*)
Electrical machinery and equipment	.79	.78	.01	.60	.59	.01
Machinery except electrical	1.39	1.35	.04	.92	.86	.07
Transportation equipment	1.48	1.55	.02	.85	.84	.01
Motor vehicles	1.00	.98	.02	.48	.47	.01
Aircraft [1]	.45	.45	(*)	.28	.28	(*)
Other transportation equipment	.14	.14	(*)	.09	.09	(*)
Stone, clay, and glass	.56	.53	.04	.55	.51	.04
Other durables	1.53	1.40	.17	1.12	.94	.18
Fabricated metal	.62	.60	.02	.49	.36	.08
Lumber	.39	.27	.12	.27	.15	.13
Furniture	.11	.10	.01	.08	.07	.01
Instruments	.29	.29	(*)	.15	.15	(*)
Ordnance and miscellaneous	.16	.15	.01	.13	.12	.02
Nondurable goods industries	8.78	8.40	.39	6.77	6.49	.29
Food, including beverage	1.53	1.38	.15	1.10	.96	.15
Textile	.43	.42	.01	.32	.31	.01
Paper	.72	.71	.01	.57	.56	.01
Chemical	1.73	1.70	.03	1.33	1.32	.01
Petroleum	3.15	3.12	.03	2.72	2.71	.01
Rubber	.37	.36	.01	.22	.21	.01
Other nondurable goods	.78	.71	.07	.62	.52	.10
Tobacco	.09	.08	.01	.06	.06	(*)
Apparel	.15	.13	.02	.10	.07	.02
Leather	.06	.06	(*)	.04	.03	.01
Printing and Publishing	.49	.44	.05	.43	.36	.07
Nonmanufacturing industries	24.55	20.78	3.76	19.41	15.86	3.55
Mining	1.27	.96	.31	1.43	1.12	.31
Railroad	1.26	1.26	.....	.94	.94	.....
Air transportation	.40	.40	.....	.27	.27	.....
Other transportation	1.58	1.29	.29	1.06	.82	.24
Public utilities	4.96	4.96	.....	5.52	5.52	.....
Electric	3.67	3.67	.....	3.99	3.99	.....
Gas and other	1.31	1.31	.....	1.53	1.53	.....
Communication	4.06	4.06	.....	2.79	2.79	.....
Commercial and other	10.99	7.82	3.17	7.45	4.39	3.06
Wholesale	1.21	.96	.24	.95	.74	.21
Retail	3.63	2.42	1.21	2.75	1.65	1.10
Services	2.96	1.93	1.03	1.81	.70	1.11
Construction	1.78	1.11	.68	1.00	.32	.68
Finance and insurance	1.58	1.39	.19	.97	.87	.10

* Less than 0.005.
1. Includes guided missile and space vehicles.

NOTE.—Details may not add to totals because of rounding.

Exceptions to the ownership basis occur in airlines and railroads. In the survey reports by the airlines, most companies include outlays for aircraft obtained through leasing or other contractual arrangements. Separate data were available to adjust the reported figures for those airlines that do not report leased equipment. Thus the estimates of airline capital outlays include the total value of all leased aircraft and are therefore essentially on a use rather than an ownership basis. Where information was obtainable on specific leasing of railroad equipment such transactions were included in the railroad figures rather than in the industry holding title to the equipment. Most of the equipment leased by the airlines and the railroads is owned by manufacturers, banks, and insurance companies.

In the case of capital expenditures by several large companies that are engaged both in manufacturing and in public utility services, data were available to allocate expenditures between the two types of operations. The manufacturing operations in question are in the electrical machinery and petroleum industries.

Starts and carryover of investment projects

Each commitment to purchase new plant and equipment initiates an investment project—whether it be the acquisition of an automobile or an entire factory. Thus the time to complete an investment project may range from days to many years. Since the end of 1962, manufacturing companies and public utilities have been asked each quarter to report the carryover of investment projects at the end of the preceding quarter. The carryover refers to the amount of expenditures yet to be made for investment projects already underway.

Estimates of starts of investment projects are not collected from the respondents but rather are made by adding reported expenditures in a given

period to the change in carryover in that period. A full description of methodology is given in the Technical Notes.

Both starts and carryover of investment projects were revised upward for manufacturing and downward for public utilities—reflecting upward and downward revisions, respectively, in those industries' capital expenditures. For public utilities, the configurations of the revised starts and carryover series are quite similar to those of the previous series. In manufacturing, the new seasonally adjusted carryover figures indicate an earlier peak in 1966 than did the previous series, and starts now peak in the final quarter of 1965 rather than in the third quarter of 1966.

Technical Notes

Plant and equipment expenditures in the OBE-SEC series are defined as expenditures for new structures and additions to existing plant (including major alterations), as well as expenditures for new machinery and equipment that are chargeable to fixed asset accounts. Expenditures include those made for replacement purposes, as well as those for additions and modernization. Excluded are land; costs of maintenance and repairs; items charged off as current operating expense; new facilities owned by the Federal Government operated under contract by private companies; and plant and equipment furnished a company by communities and organizations. Also excluded are expenditures for installation outside the United States. Annual estimates of capital expenditures made abroad by U.S. companies are regularly reported separately in the SURVEY OF CURRENT BUSINESS.

More detailed definitions of terms as well as the instructions sent to cooperating companies can be found in the OBE reporting forms shown at the end of the article. Form 452 is mailed to manufacturers and Form 456 to companies in all other industries. An essentially similar form (Form R3) is used by the Securities and Exchange Commission.

Methodology

The new figures were developed in three steps. First, annual estimates for each industry were calculated for the years 1948, 1958, and 1963, utilizing the most comprehensive data available. The year 1948 was the base period for

Table 1.—Expenditures for New Plant and Equipment by U.S. Business,[1] 1947–69

[Billions of dollars]

	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969*
All industries	19.39	21.39	18.66	20.87	25.48	26.43	28.29	27.19	29.52	35.73	37.34	31.83	31.25	35.76	35.92	36.39	36.17	36.97	54.42	63.61	65.47	67.70	75.30
Manufacturing industries	8.44	9.61	7.12	7.39	10.71	11.45	11.84	11.24	11.89	15.46	16.51	12.38	12.77	15.69	14.39	15.96	16.22	19.34	29.44	35.30	36.51	38.37	31.74
Durable goods industries	3.25	3.39	2.45	2.94	4.82	5.21	5.31	4.91	5.41	7.45	7.84	5.61	6.21	7.39	6.31	6.79	7.59	9.28	11.50	14.96	14.46	14.13	16.99
Primary metal	.81	.94	.74	.72	1.44	1.94	1.56	.98	1.03	1.61	2.45	1.56	1.36	1.62	1.30	1.37	1.61	2.18	2.54	2.97	3.24	3.36	2.23
Blast furnaces and steel works	.45	.55	.45	.42	.76	1.26	.93	.59	.66	1.02	1.36	.99	.62	1.05	.67	.73	.88	1.41	1.57	1.70	1.92	2.00	1.39
Nonferrous metal	.19	.19	.15	.13	.32	.54	.44	.26	.23	.44	.66	.48	.34	.32	.30	.25	.45	.55	.73	.98	1.07	1.08	1.14
Other primary metal	.19	.19	.14	.16	.36	.14	.29	.11	.12	.14	.31	.09	.09	.15	.13	.14	.16	.20	.24	.29	.25	.26	.29
Electrical machinery and equipment	.30	.29	.21	.25	.62	.45	.57	.54	.54	.77	.77	.60	.66	.99	.88	.69	.79	.85	1.12	1.62	1.70	1.78	2.02
Machinery except electrical	.62	.55	.39	.41	.69	.69	.76	.68	.80	1.08	1.25	.92	1.02	1.26	1.20	1.21	1.39	1.79	2.31	2.87	2.94	2.84	3.42
Transportation equipment	.60	.88	.45	.67	1.02	.98	1.06	1.32	1.28	1.59	1.46	.85	.98	1.25	1.19	1.33	1.56	1.96	3.54	3.96	2.72	2.48	2.79
Motor vehicles	.50	.47	.26	.49	.77	.77	.87	1.12	.97	1.44	.99	.48	.58	.78	.49	.78	1.06	1.30	1.95	1.90	1.54	1.36	1.65
Aircraft [2]	.04	.06	.06	.06	.18	.18	.35	.15	.23	.37	.45	.26	.36	.34	.39	.49	.46	.43	.46	.93	.93	.86	.90
Other transportation equipment	.06	.06	.04	.03	.04	.04	.04	.04	.06	.08	.09	.09	.09	.13	.11	.15	.14	.18	.18	.24	.24	.25	.28
Stone, clay, and glass	.28	.36	.18	.28	.45	.38	.41	.44	.64	.89	.79	.56	.69	.73	.70	.70	.68	.74	.92	1.16	.96	.96	1.10
Other durables	.69	.79	.51	.76	.93	.76	.92	.96	1.16	1.25	1.15	1.12	1.23	1.26	1.12	1.28	1.49	1.74	2.07	2.48	2.50	2.52	3.44
Fabricated metal	.33	.31	.25	.28	.38	.38	.47	.47	.54	.68	.69	.49	.54	.62	.45	.53	.62	.79	.88	1.02	1.10	1.22	1.25
Lumber	.18	.23	.14	.18	.22	.17	.17	.22	.29	.28	.28	.27	.28	.32	.24	.30	.30	.36	.48	.48	.39	.33	.84
Furniture	.08	.08	.04	.06	.06	.06	.06	.06	.09	.09	.09	.06	.08	.07	.08	.10	.11	.15	.15	.18	.20	.18	.24
Instruments	.06	.06	.05	.07	.10	.10	.11	.14	.16	.19	.19	.15	.18	.24	.22	.28	.26	.29	.37	.53	.58	.55	.71
Ordnance and miscellaneous [3]	.06	.06	.02	.04	.07	.08	.12	.08	.10	.10	.08	.12	.13	.12	.12	.16	.16	.19	.19	.37	.29	.23	.39
Nondurable goods industries	5.19	5.71	4.68	4.45	5.89	6.24	6.54	6.32	6.48	7.96	8.55	6.77	6.95	7.85	8.08	8.26	8.76	10.07	11.94	14.14	14.45	14.25	15.74
Food, including beverage	.96	1.32	.92	.78	.94	.88	.85	.93	.90	1.05	1.16	1.10	1.22	1.34	1.32	1.51	1.53	1.72	1.83	2.10	2.08	2.23	2.58
Textile	.51	.58	.46	.43	.46	.49	.34	.30	.31	.38	.32	.22	.30	.37	.30	.36	.43	.52	.66	.82	.68	.53	.82
Paper	.37	.38	.30	.33	.43	.36	.41	.46	.51	.79	.80	.67	.63	.77	.64	.66	.72	.97	1.22	1.43	1.56	1.32	1.58
Chemical	1.06	.94	.67	.77	1.26	1.39	1.48	1.13	1.07	1.46	1.78	1.33	1.17	1.56	1.39	1.46	1.73	2.08	2.72	3.25	3.06	2.83	3.12
Petroleum	1.74	2.16	1.88	1.83	2.22	2.72	2.80	2.93	3.08	3.47	3.44	2.72	2.76	2.89	3.00	3.12	3.25	3.59	4.09	4.70	5.08	5.23	5.65
Rubber	.17	.13	.11	.14	.19	.19	.20	.18	.20	.27	.26	.22	.26	.31	.31	.33	.37	.44	.56	.64	.67	.68	1.20
Other nondurables	.49	.39	.38	.37	.38	.31	.33	.41	.49	.52	.69	.62	.62	.82	.63	.40	.73	.75	.92	1.18	1.31	1.13	1.10
Tobacco	.04	.06	.04	.03	.04	.04	.04	.06	.06	.07	.08	.06	.06	.06	.05	.06	.07	.09	.06	.08	.10	.10	.09
Apparel	.09	.08	.06	.07	.07	.06	.06	.08	.09	.09	.11	.10	.10	.09	.09	.11	.15	.14	.20	.24	.23	.21	.22
Leather	.03	.03	.03	.03	.02	.02	.02	.03	.04	.04	.04	.04	.04	.04	.04	.05	.05	.05	.07	.09	.09	.12	.14
Printing and publishing	.23	.22	.24	.25	.25	.19	.20	.24	.27	.28	.35	.43	.43	.44	.43	.46	.49	.49	.58	.76	.87	.70	.65
Nonmanufacturing industries	10.95	12.29	11.55	12.52	14.76	14.98	16.34	15.95	17.64	20.34	21.43	19.51	18.78	21.06	21.68	20.39	20.56	27.62	30.98	28.32	35.96	39.48	43.56
Mining	.99	.98	.88	.84	1.11	1.21	1.23	1.28	1.31	1.64	1.69	1.42	1.36	1.30	1.29	1.40	1.37	1.34	1.46	1.62	1.65	1.53	1.37
Railroad	.91	1.37	1.42	1.18	1.58	1.40	1.42	.93	1.02	1.37	1.58	.86	1.02	1.16	.82	1.02	1.26	1.08	1.99	2.37	1.85	1.45	1.33
Air transportation	.17	.10	.12	.18	.14	.24	.34	.24	.28	.35	.41	.37	.78	.66	.73	.52	.40	1.02	1.22	1.74	2.29	2.56	2.50
Other transportation	1.19	1.17	.76	1.09	1.33	1.23	1.29	1.22	1.36	1.31	1.33	1.06	1.38	1.30	1.23	1.65	1.58	1.60	1.68	1.64	1.48	1.59	1.70
Public utilities	1.54	2.54	3.10	3.24	3.53	3.74	4.34	3.98	4.02	4.62	5.67	5.53	6.14	6.34	6.00	4.90	4.98	5.49	6.13	7.43	8.74	10.20	11.156
Electric	1.03	1.90	2.17	2.07	2.25	2.72	3.19	3.06	2.87	3.13	3.98	3.98	3.86	3.62	3.55	3.53	3.67	3.97	4.43	5.38	6.75	7.66	8.88
Gas and other	.51	.64	.93	1.16	1.21	1.02	1.17	.95	1.15	1.49	1.69	1.53	1.54	1.62	1.45	1.38	1.31	1.51	1.70	2.05	2.00	2.54	2.70
Communication	1.40	1.74	1.34	1.14	1.37	1.61	1.78	1.92	2.11	2.82	3.19	2.79	2.72	2.24	2.30	2.35	2.06	4.61	5.30	5.02	6.24	6.53	8.31
Commercial and other	5.05	4.42	4.24	5.22	5.67	5.45	6.02	6.45	7.33	8.32	7.60	7.48	6.44	6.75	9.13	9.99	10.99	12.42	13.19	14.45	14.59	15.14	15.79

1. Excludes agricultural business; real estate operators; medical, legal, educational, and cultural services; and nonprofit membership organizations.
2. Includes guided missiles and space vehicles.
3. Excludes guided missiles and space vehicles.

* Preliminary.

NOTE.—Details may not add to totals because of rounding.

SOURCES: U.S. Department of Commerce, Office of Business Economics, and the Securities and Exchange Commission.

Table 2.—Expenditures for New Plant and Equipment by U.S. Business,[1] Quarterly, Not Adjusted for Seasonal Variation, 1947–69

[Billions of dollars]

	All industries	Manufacturing industries											
		Total	Durable goods										
			Total	Primary metal			Electrical machinery	Machinery except electrical	Transportation equipment			Stone, clay, and glass	Other durables[4]
				Total[2]	Blast furnace steel works	Non-ferrous			Total[2]	Motor vehicles	Aircraft[3]		
1947: I	4.06	1.80	0.71	0.15	0.08	0.03	0.06	0.15	0.14	0.13	0.01	0.08	0.16
II	4.79	2.11	.86	.22	.12	.05	.06	.14	.16	.14	.01	.09	.19
III	4.88	2.08	.78	.19	.14	.05	.07	.12	.13	.10	.01	.09	.17
IV	5.60	2.44	.90	.25	.15	.05	.09	.12	.17	.14	.01	.08	.17
1948: I	4.76	2.16	.76	.20	.12	.04	.08	.12	.14	.13	.01	.08	.16
II	5.34	2.28	.84	.26	.14	.05	.09	.12	.14	.11	.02	.07	.18
III	5.18	2.13	.82	.26	.15	.05	.08	.13	.13	.11	.01	.08	.18
IV	6.03	2.46	.90	.24	.16	.05	.07	.14	.17	.14	.02	.06	.18
1949: I	4.66	1.86	.64	.20	.12	.03	.06	.10	.10	.08	.01	.04	.14
II	4.93	1.83	.61	.19	.12	.06	.05	.10	.12	.09	.02	.04	.12
III	4.58	1.54	.56	.17	.10	.04	.04	.09	.11	.09	.01	.03	.11
IV	4.84	1.73	.64	.18	.10	.04	.04	.10	.12	.10	.01	.05	.12
1950: I	4.05	1.42	.53	.14	.08	.04	.04	.08	.08	.07	.01	.04	.12
II	4.78	1.68	.68	.15	.10	.02	.06	.09	.13	.11	.01	.07	.17
III	5.17	1.94	.78	.17	.10	.02	.07	.10	.18	.14	.02	.08	.17
IV	6.26	2.45	1.06	.26	.15	.04	.08	.14	.20	.17	.02	.11	.22
1951: I	5.40	2.12	.98	.22	.12	.05	.07	.13	.18	.15	.03	.08	.20
II	6.47	2.78	1.16	.32	.16	.07	.10	.15	.26	.20	.04	.12	.21
III	6.44	2.76	1.27	.39	.22	.08	.11	.18	.28	.21	.06	.13	.20
IV	7.15	3.19	1.51	.52	.28	.12	.14	.22	.28	.20	.06	.14	.22
1952: I	6.24	2.68	1.30	.42	.24	.13	.10	.16	.28	.17	.06	.10	.28
II	6.85	3.04	1.33	.61	.32	.13	.11	.17	.25	.18	.05	.09	.28
III	6.28	2.65	1.24	.45	.28	.15	.10	.15	.24	.20	.03	.09	.17
IV	7.14	3.18	1.48	.47	.41	.55	.14	.21	.26	.21	.04	.10	.20
1953: I	6.27	2.60	1.18	.48	.23	.11	.10	.18	.21	.17	.04	.09	.32
II	7.25	3.09	1.35	.42	.28	.12	.14	.22	.23	.18	.04	.10	.34
III	7.05	2.84	1.24	.47	.22	.10	.14	.18	.25	.20	.04	.10	.21
IV	7.68	3.31	1.52	.38	.22	.11	.10	.21	.36	.32	.09	.11	.28
1954: I	6.31	2.58	1.14	.35	.15	.07	.12	.16	.25	.25	.03	.09	.24
II	7.03	2.91	1.26	.26	.16	.07	.13	.17	.35	.31	.04	.11	.23
III	6.70	2.58	1.16	.31	.13	.06	.12	.16	.34	.29	.04	.10	.22
IV	7.15	3.07	1.36	.24	.15	.06	.16	.19	.34	.28	.05	.15	.38
1955: I	6.01	2.31	1.04	.18	.12	.04	.11	.16	.24	.19	.06	.11	.24
II	7.16	2.91	1.27	.24	.16	.05	.13	.18	.28	.22	.05	.13	.30
III	7.62	3.03	1.38	.26	.16	.06	.13	.28	.32	.28	.06	.16	.29
IV	8.74	3.65	1.72	.34	.22	.06	.17	.25	.40	.30	.07	.24	.33
1956: I	7.67	3.03	1.49	.27	.17	.07	.13	.22	.37	.29	.08	.17	.26
II	9.44	3.84	1.82	.38	.24	.09	.18	.25	.47	.37	.09	.22	.32
III	9.04	3.95	1.91	.38	.24	.11	.20	.26	.62	.49	.10	.23	.32
IV	9.96	4.58	2.20	.58	.30	.17	.28	.32	.63	.38	.12	.24	.35
1957: I	8.64	3.61	1.71	.65	.26	.16	.15	.26	.38	.34	.10	.18	.27
II	9.85	4.31	2.06	.69	.34	.23	.29	.31	.43	.37	.13	.28	.30
III	9.57	4.14	1.94	.66	.30	.24	.19	.30	.34	.21	.11	.18	.27
IV	9.98	4.45	2.13	.71	.40	.25	.23	.39	.33	.17	.12	.19	.32
1958: I	7.70	3.20	1.53	.44	.27	.15	.14	.27	.22	.12	.08	.17	.28
II	8.02	3.28	1.46	.42	.27	.12	.16	.24	.22	.14	.09	.15	.27
III	7.73	2.84	1.28	.39	.23	.10	.13	.20	.21	.12	.07	.11	.28
IV	8.46	3.11	1.35	.35	.22	.11	.18	.22	.20	.10	.07	.13	.30
1959: I	7.09	2.59	1.11	.29	.16	.09	.13	.19	.18	.10	.04	.13	.34
II	8.46	3.16	1.46	.34	.22	.09	.16	.25	.22	.15	.07	.17	.30
III	8.63	3.19	1.47	.29	.16	.07	.17	.25	.27	.18	.08	.21	.32
IV	8.39	3.63	1.79	.42	.28	.10	.22	.32	.28	.17	.09	.18	.38
1960: I	8.06	3.17	1.64	.39	.27	.07	.26	.30	.25	.14	.08	.18	.29
II	9.73	3.87	1.89	.48	.36	.08	.21	.33	.32	.21	.08	.20	.35
III	9.87	3.73	1.77	.48	.38	.08	.21	.27	.34	.23	.08	.18	.30
IV	9.90	4.32	2.04	.46	.35	.09	.32	.35	.34	.21	.10	.19	.34
1961: I	7.72	3.09	1.41	.39	.23	.07	.19	.20	.22	.18	.06	.14	.25
II	9.07	3.66	1.59	.32	.22	.08	.23	.21	.28	.19	.07	.18	.28
III	8.93	3.43	1.47	.30	.19	.08	.22	.25	.30	.18	.07	.18	.26
IV	10.18	4.16	1.84	.35	.23	.08	.24	.35	.34	.20	.10	.23	.34
1962: I	8.27	3.20	1.38	.28	.14	.08	.16	.39	.36	.15	.07	.14	.37
II	9.80	3.75	1.69	.31	.19	.08	.19	.34	.33	.21	.09	.19	.33
III	9.71	3.77	1.74	.33	.20	.09	.20	.31	.30	.20	.13	.17	.37
IV	10.61	4.34	1.99	.38	.22	.12	.36	.36	.36	.22	.12	.20	.41
1963: I	8.39	3.31	1.51	.21	.16	.09	.13	.29	.21	.16	.09	.16	.30
II	10.14	4.41	1.88	.39	.21	.12	.20	.35	.40	.27	.11	.17	.40
III	10.49	4.14	1.88	.41	.23	.10	.19	.32	.41	.27	.11	.16	.40
IV	11.84	4.77	2.25	.47	.29	.12	.24	.42	.48	.28	.14	.18	.48
1964: I	10.00	3.94	1.86	.42	.27	.10	.17	.36	.37	.23	.10	.17	.36
II	11.85	4.77	2.29	.60	.32	.13	.21	.46	.49	.33	.11	.18	.46
III	11.70	4.78	2.27	.64	.36	.14	.24	.48	.52	.39	.09	.17	.41
IV	13.42	5.80	2.86	.71	.47	.28	.27	.55	.61	.44	.12	.22	.50
1965: I	11.20	4.71	2.34	.48	.29	.15	.19	.45	.53	.39	.08	.19	.42
II	13.85	5.69	2.77	.58	.37	.16	.25	.54	.64	.50	.09	.23	.53
III	13.65	5.92	2.89	.64	.40	.18	.28	.48	.69	.51	.13	.29	.49
IV	15.93	7.11	3.60	.68	.61	.24	.29	.77	.70	.49	.16	.27	.63
1966: I	13.83	5.79	2.88	.58	.33	.19	.30	.62	.69	.40	.25	.30	.53
II	16.05	7.08	3.50	.75	.42	.25	.38	.73	.75	.46	.28	.20	.64
III	15.92	7.08	3.46	.74	.42	.24	.30	.68	.75	.47	.25	.27	.60
IV	18.22	8.30	4.21	.80	.62	.30	.54	.86	.83	.47	.28	.37	.72
1967: I	14.46	6.54	3.14	.68	.39	.24	.36	.70	.61	.35	.31	.23	.63
II	15.89	7.82	3.66	.81	.48	.27	.41	.79	.79	.43	.32	.20	.69
III	16.20	6.85	3.40	.81	.48	.27	.41	.71	.67	.39	.22	.22	.68
IV	18.12	7.77	3.86	.93	.57	.29	.41	.74	.74	.39	.26	.24	.59
1968: I	15.10	6.15	3.46	.70	.40	.24	.37	.66	.54	.32	.17	.18	.60
II	15.86	6.99	3.36	.79	.46	.26	.44	.65	.61	.34	.21	.23	.69
III	16.70	7.13	3.64	.68	.52	.29	.43	.67	.66	.35	.23	.20	.70
IV	18.03	8.10	4.16	.99	.62	.31	.54	.68	.68	.35	.25	.25	.86
1969: I	16.04	6.58	3.38	.71	.41	.28	.39	.72	.59	.34	.18	.28	.71
II	18.81	7.82	3.98	.81	.47	.27	.50	.84	.69	.40	.22	.28	.84
III	19.24	8.16	4.03	.81	.45	.28	.49	.86	.77	.46	.23	.27	.84

1. Excludes agricultural business; real estate operators; medical, legal, educational, and cultural service; and nonprofit organizations.
2. Includes data not shown separately.
3. Includes guided missiles and space vehicles.
4. Includes fabricated metal, lumber, furniture, instrument, ordnance and miscellaneous except guided missiles and space vehicles.

Table 2.—Expenditures for New Plant and Equipment by U.S. Business,[1] Quarterly, Not Adjusted for Seasonal Variation, 1947–69—Con.

[Billions of dollars]

	Manufacturing industries—Continued								Nonmanufacturing industries								
		Nondurable goods												Public utilities			
	Total	Food including beverage	Textile	Paper	Chemical	Petroleum	Rubber	Other nondurables[2]	Total	Mining	Railroad	Air transportation	Other transportation	Total	Electric	Gas and other	Communication	Commercial and other[3]
1947: I	1.10	0.21	0.11	0.09	0.25	0.22	0.04	0.06	2.28	0.11	0.16	0.03	0.25	0.98	0.18	0.49	0.30	1.15
II	1.25	.23	.13	.09	.29	.38	.04	.10	2.68	.13	.22	.06	.30	.36	.24	.12	.36	1.53
III	1.30	.24	.13	.09	.31	.45	.04	.10	2.90	.17	.23	.04	.28	.42	.27	.15	.37	1.50
IV	1.55	.28	.14	.11	.36	.59	.05	.12	3.18	.26	.31	.04	.30	.50	.36	.16	.45	1.27
1948: I	1.41	.25	.14	.09	.33	.57	.04	.10	2.80	.16	.25	.02	.27	.46	.36	.09	.43	.96
II	1.44	.28	.15	.10	.36	.51	.04	.11	3.09	.26	.32	.04	.31	.62	.47	.14	.44	1.06
III	1.31	.26	.14	.10	.36	.46	.03	.08	3.05	.20	.32	.03	.29	.64	.46	.18	.42	1.14
IV	1.55	.30	.15	.10	.36	.63	.03	.10	2.53	.20	.43	.02	.31	.53	.60	.23	.44	1.23
1949: I	1.21	.26	.15	.07	.16	.44	.03	.10	2.31	.28	.23	.02	.20	.69	.47	.16	.38	.97
II	1.27	.24	.13	.08	.20	.50	.03	.11	2.05	.24	.20	.02	.21	.77	.54	.21	.36	1.05
III	1.08	.22	.09	.07	.15	.43	.03	.09	2.03	.19	.23	.04	.19	.79	.54	.25	.31	1.08
IV	1.12	.20	.09	.08	.17	.47	.03	.09	2.06	.20	.22	.04	.18	.99	.60	.38	.31	1.15
1950: I	.89	.17	.09	.07	.14	.33	.03	.07	2.04	.17	.21	.01	.24	.63	.44	.19	.27	1.08
II	1.02	.19	.10	.08	.18	.39	.03	.08	2.04	.20	.21	.02	.26	.73	.52	.22	.28	1.22
III	1.11	.19	.10	.08	.19	.41	.03	.10	2.33	.22	.21	.03	.29	.84	.58	.26	.27	1.23
IV	1.42	.24	.14	.10	.26	.59	.05	.13	2.81	.26	.23	.04	.29	1.06	.69	.47	.32	1.53
1951: I	1.24	.24	.11	.09	.23	.39	.04	.12	2.93	.22	.21	.02	.33	.71	.48	.23	.30	1.26
II	1.34	.26	.14	.11	.33	.34	.04	.12	2.77	.29	.22	.05	.36	.88	.58	.30	.33	1.44
III	1.43	.22	.11	.11	.31	.66	.04	.08	2.74	.29	.23	.04	.33	.95	.58	.38	.33	1.43
IV	1.68	.22	.12	.11	.36	.73	.05	.07	2.87	.31	.23	.03	.30	1.02	.62	.40	.33	1.42
1952: I	1.37	.23	.11	.08	.31	.53	.04	.08	2.86	.29	.22	.03	.32	.80	.53	.28	.27	1.43
II	1.72	.24	.11	.09	.35	.73	.05	.09	3.31	.31	.22	.05	.34	.94	.66	.28	.29	1.37
III	1.45	.23	.09	.09	.34	.42	.05	.06	3.56	.28	.21	.05	.37	.93	.66	.28	.30	1.33
IV	1.70	.23	.09	.10	.39	.70	.04	.07	3.97	.32	.23	.05	.39	1.19	.79	.32	.45	1.35
1953: I	1.42	.22	.09	.08	.32	.56	.04	.10	3.66	.27	.24	.06	.39	.89	.66	.28	.40	1.43
II	1.75	.23	.10	.09	.38	.74	.05	.09	4.15	.28	.29	.06	.33	1.11	.81	.30	.46	1.52
III	1.69	.22	.08	.11	.34	.73	.05	.07	4.19	.33	.32	.05	.35	1.16	.84	.33	.43	1.56
IV	1.80	.22	.08	.12	.38	.86	.04	.09	4.34	.37	.37	.07	.33	1.13	.89	.33	.49	1.53
1954: I	1.44	.23	.07	.10	.31	.63	.04	.10	3.73	.28	.27	.05	.30	.88	.69	.21	.43	1.49
II	1.65	.25	.08	.12	.39	.76	.05	.11	4.11	.34	.27	.06	.31	1.06	.79	.27	.46	1.50
III	1.59	.22	.07	.11	.35	.74	.04	.10	4.09	.33	.19	.05	.31	1.00	.76	.24	.44	1.79
IV	1.71	.23	.08	.12	.38	.85	.05	.11	4.58	.33	.29	.05	.31	1.04	.81	.23	.48	1.66
1955: I	1.37	.22	.07	.09	.29	.54	.04	.09	3.70	.25	.20	.03	.30	.80	.64	.15	.45	1.66
II	1.64	.23	.08	.12	.33	.80	.05	.12	4.38	.32	.24	.06	.32	.98	.76	.24	.48	1.80
III	1.64	.21	.07	.14	.34	.82	.05	.11	4.80	.34	.24	.06	.33	1.08	.73	.36	.52	2.01
IV	1.92	.23	.10	.16	.42	.92	.06	.14	5.09	.40	.25	.06	.35	1.15	.78	.38	.54	2.15
1956: I	1.80	.22	.09	.15	.38	.82	.06	.11	4.82	.35	.23	.07	.32	.87	.69	.27	.45	2.09
II	2.02	.27	.10	.20	.37	.82	.07	.13	5.28	.43	.26	.06	.33	1.11	.76	.35	.71	2.19
III	2.04	.27	.09	.20	.37	.80	.07	.14	5.10	.41	.31	.09	.34	1.22	.84	.37	.70	2.04
IV	2.28	.29	.10	.24	.44	.99	.08	.15	5.41	.46	.37	.11	.32	1.24	.95	.28	.82	2.08
1957: I	1.90	.23	.09	.16	.35	.81	.06	.12	4.80	.30	.35	.05	.29	1.11	.83	.29	.76	1.96
II	2.25	.30	.09	.22	.44	.99	.07	.14	5.64	.42	.42	.04	.34	1.39	.96	.42	.84	2.01
III	2.20	.28	.07	.20	.44	1.00	.06	.14	5.43	.42	.40	.10	.33	1.57	1.05	.52	.77	1.83
IV	2.32	.30	.07	.19	.50	1.05	.07	.15	5.53	.43	.33	.11	.35	1.41	1.14	.47	.83	1.82
1958: I	1.68	.24	.06	.15	.35	.66	.04	.16	4.50	.34	.29	.11	.26	1.13	.88	.25	.76	1.66
II	1.78	.22	.05	.14	.36	.74	.04	.15	4.70	.36	.28	.08	.26	1.30	1.02	.27	.73	1.53
III	1.57	.20	.05	.15	.30	.63	.05	.14	4.88	.34	.16	.06	.24	1.49	1.01	.50	.64	1.92
IV	1.75	.20	.06	.13	.31	.74	.05	.17	5.34	.30	.18	.12	.30	1.49	1.07	.52	.71	2.07
1959: I	1.47	.27	.06	.12	.24	.58	.05	.15	4.60	.30	.13	.13	.30	1.40	.78	.32	.61	1.90
II	1.72	.23	.06	.14	.28	.68	.06	.16	5.20	.34	.23	.20	.35	1.33	.91	.43	.69	2.09
III	1.72	.31	.07	.16	.28	.60	.07	.14	5.45	.35	.31	.22	.34	1.34	.92	.42	.67	2.20
IV	2.04	.32	.10	.20	.37	.80	.08	.15	5.56	.37	.24	.23	.34	1.37	1.00	.38	.75	2.26
1960: I	1.68	.26	.08	.16	.31	.57	.06	.14	4.82	.30	.26	.18	.30	1.06	.77	.31	.73	2.01
II	2.06	.37	.09	.18	.40	.77	.08	.18	5.76	.38	.32	.20	.36	1.31	.86	.38	.82	2.35
III	2.05	.34	.08	.20	.40	.70	.08	.15	5.84	.39	.27	.14	.32	1.39	.92	.47	.80	2.09
IV	2.19	.36	.10	.21	.44	.86	.08	.15	5.68	.33	.29	.14	.31	1.46	1.00	.46	.88	2.29
1961: I	1.88	.33	.08	.16	.32	.61	.07	.12	4.68	.28	.20	.17	.24	1.08	.74	.35	.78	1.97
II	2.06	.38	.08	.17	.41	.77	.07	.17	5.42	.34	.22	.19	.30	1.26	.82	.44	.85	2.35
III	1.96	.38	.08	.14	.39	.75	.06	.14	5.50	.33	.20	.18	.32	1.26	.82	.43	.82	2.38
IV	2.32	.43	.06	.17	.47	.87	.10	.20	6.02	.35	.19	.19	.37	1.29	.88	.42	.94	2.61
1962: I	1.92	.34	.06	.13	.38	.68	.07	.16	5.07	.35	.16	.13	.30	.95	.74	.21	.83	2.15
II	2.07	.40	.10	.16	.39	.75	.09	.16	6.04	.35	.22	.20	.44	1.23	.83	.41	.99	2.61
III	2.03	.35	.10	.17	.37	.82	.09	.14	5.94	.35	.28	.15	.38	1.27	.80	.47	.92	2.66
IV	2.35	.42	.11	.23	.44	.87	.09	.22	6.27	.34	.23	.17	.43	1.35	.97	.38	1.02	2.84
1963: I	1.90	.31	.10	.14	.38	.64	.07	.16	5.08	.30	.24	.07	.35	.92	.73	.20	.90	2.29
II	2.12	.37	.12	.18	.43	.76	.08	.18	6.13	.31	.23	.10	.45	1.24	.93	.31	1.02	2.79
III	2.25	.42	.10	.18	.42	.80	.11	.20	6.26	.31	.23	.09	.37	1.43	.98	.43	1.00	2.74
IV	2.52	.43	.11	.21	.50	.94	.10	.24	7.07	.34	.27	.14	.40	1.48	1.05	.37	1.14	3.38
1964: I	2.09	.38	.10	.18	.39	.75	.10	.18	6.08	.31	.27	.22	.32	1.04	.84	.33	1.04	2.75
II	2.48	.44	.12	.22	.49	.90	.10	.19	7.06	.34	.43	.28	.41	1.39	1.01	.38	1.18	3.06
III	2.51	.45	.13	.24	.52	.89	.11	.18	6.93	.34	.44	.25	.36	1.51	1.03	.48	1.14	2.88
IV	3.00	.44	.17	.22	.58	1.45	.12	.21	7.55	.36	.41	.28	.39	1.55	1.13	.42	1.25	3.81
1965: I	2.47	.37	.13	.26	.57	.88	.12	.19	6.49	.33	.45	.26	.35	1.16	.91	.25	1.15	2.73
II	2.91	.48	.15	.30	.66	.96	.14	.22	7.94	.38	.51	.34	.46	1.51	1.09	.42	1.33	3.41
III	2.93	.46	.18	.31	.66	1.03	.14	.24	7.73	.36	.60	.34	.42	1.66	1.22	.44	1.31	3.14
IV	3.53	.52	.21	.35	.82	1.21	.16	.26	8.93	.39	.52	.29	.48	1.80	1.33	.48	1.51	3.86
1966: I	2.91	.45	.18	.29	.65	1.00	.13	.21	7.54	.38	.45	.28	.36	1.41	1.08	.34	1.35	3.21
II	3.62	.55	.22	.36	.82	1.14	.17	.26	9.02	.45	.47	.34	.47	1.84	1.33	.52	1.52	3.55
III	3.63	.54	.22	.37	.80	1.19	.17	.24	8.84	.40	.38	.41	.40	2.06	1.42	.57	1.48	3.51
IV	4.08	.55	.28	.43	.99	1.37	.18	.27	9.92	.42	.57	.41	.42	2.09	1.55	.53	1.70	4.22
1967: I	3.40	.49	.18	.35	.78	1.12	.16	.21	7.93	.35	.50	.37	.32	1.69	1.33	.32	1.45	3.32
II	3.77	.57	.18	.42	.82	1.35	.16	.23	8.36	.39	.45	.73	.38	2.18	1.65	.53	1.60	3.65
III	3.43	.50	.16	.40	.71	1.21	.15	.20	9.23	.44	.41	.35	.41	2.35	1.71	.64	1.57	3.59
IV	3.81	.53	.16	.36	.75	1.46	.21	.23	10.35	.47	.50	.44	.38	2.59	2.08	.51	1.73	4.04
1968: I	3.69	.45	.13	.27	.65	1.15	.18	.25	8.95	.42	.39	.48	.39	2.07	1.59	.48	1.59	3.50
II	3.83	.57	.18	.38	.78	1.26	.22	.23	9.88	.43	.37	.58	.43	2.33	1.94	.39	1.62	3.81
III	3.59	.51	.13	.32	.66	1.33	.20	.27	9.86	.30	.31	.64	.41	2.64	1.87	.76	1.61	3.69
IV	3.94	.57	.16	.37	.77	1.38	.21	.23	10.03	.40	.33	.46	.47	2.90	2.16	.74	2.00	4.13
1969: I	3.22	.54	.13	.31	.67	1.13	.18	.20	9.43	.42	.28	.68	.38	2.38	1.82	.48	1.81	3.48
II	3.84	.64	.16	.40	.78	1.32	.26	.27	10.30	.48	.44	.66	.45	2.90	2.22	.77	2.00	3.97
III	4.12	.68	.17	.41	.78	1.49	.28	.32	11.16	.47	.49	.55	.40	3.03	2.28	.80	2.11	4.07

5. Includes apparel, tobacco, leather and printing-publishing.
6. Includes trade, service, construction, finance and insurance.

NOTE.—Details may not add to totals because of rounding.

Source: U.S. Department of Commerce, Office of Business Economics, and the Securities and Exchange Commission.

Table 3.—Expenditures for New Plant and Equipment by U.S. Business,[1] Quarterly, Seasonally Adjusted at Annual Rates, 1947–69

[Billions of dollars]

	All industries	Manufacturing industries											
		Total	Durable goods										
			Total	Primary metal			Electrical machinery	Machinery except electrical	Transportation equipment			Stone, clay and glass	Other durables[4]
				Total[2]	Blast furnace, steel works	Nonferrous			Total[2]	Motor vehicles	Aircraft[3]		
1947: I	18.14	8.01	3.24	0.95	0.88	0.14	0.48	0.54	0.70	0.59	0.04	0.22	0.70
II	19.02	8.36	3.44	.88	.47	.21	.53	.60	.63	.54	.04	.24	.72
III	19.79	8.64	3.52	.78	.43	.18	.50	.50	.54	.44	.05	.21	.77
IV	20.27	8.74	3.12	.89	.50	.18	.49	.48	.55	.47	.04	.26	.84
1948: I	22.12	9.54	3.39	.91	.52	.20	.52	.53	.66	.59	.04	.23	.88
II	21.10	9.60	3.34	.97	.56	.21	.53	.52	.64	.43	.06	.25	.71
III	21.09	8.82	3.40	1.00	.60	.22	.51	.55	.65	.44	.05	.25	.74
IV	21.34	8.76	3.16	.90	.55	.17	.52	.50	.65	.45	.06	.26	.69
1949: I	21.67	8.20	2.90	.89	.57	.14	.52	.44	.50	.38	.04	.20	.69
II	19.47	7.40	2.42	.76	.47	.14	.49	.40	.45	.35	.04	.17	.67
III	18.50	6.79	2.24	.70	.43	.16	.48	.36	.43	.33	.04	.14	.65
IV	17.57	6.28	2.22	.62	.36	.14	.49	.35	.42	.35	.04	.16	.66
1950: I	17.94	6.28	2.26	.65	.38	.15	.49	.37	.38	.33	.03	.20	.55
II	18.66	6.69	2.63	.82	.52	.19	.51	.37	.53	.45	.04	.26	.66
III	20.09	7.66	3.02	.95	.62	.11	.58	.40	.62	.53	.05	.33	.71
IV	22.95	8.32	3.63	.88	.53	.16	.50	.50	.72	.59	.08	.32	.84
1951: I	23.69	8.43	3.48	1.02	.64	.23	.56	.53	.68	.51	.12	.40	.82
II	25.44	10.55	4.61	1.28	.88	.26	.43	.60	1.02	.82	.16	.48	.92
III	26.17	11.16	5.22	1.53	.97	.24	.44	.77	1.09	.83	.22	.49	.98
IV	26.28	12.36	5.30	1.80	.97	.43	.46	.77	1.00	.76	.22	.47	.98
1952: I	27.49	11.84	5.46	1.91	1.13	.33	.48	.71	1.18	.79	.24	.45	.83
II	26.84	11.86	5.27	2.03	1.38	.28	.46	.68	.99	.74	.20	.37	.76
III	25.15	10.93	4.92	1.85	1.15	.23	.45	.64	.92	.76	.12	.36	.73
IV	26.27	11.36	5.20	1.97	1.40	.23	.45	.73	.85	.77	.13	.35	.75
1953: I	27.65	11.89	5.36	1.77	1.10	.45	.50	.80	.97	.75	.16	.40	.82
II	28.38	12.03	5.38	1.66	.99	.47	.53	.84	.92	.73	.15	.41	.82
III	28.44	11.73	5.16	1.53	.89	.42	.56	.78	.97	.76	.17	.42	.91
IV	26.38	11.84	5.35	1.42	.74	.38	.61	.73	1.34	1.19	.12	.39	.97
1954: I	27.38	11.73	5.15	1.28	.70	.34	.56	.69	1.31	1.14	.13	.42	1.03
II	27.50	11.30	4.96	1.01	.61	.29	.54	.68	1.42	1.24	.14	.43	.90
III	28.93	10.99	4.70	.86	.54	.22	.52	.69	1.30	1.11	.14	.40	.93
IV	28.50	11.01	4.80	.83	.53	.28	.53	.66	1.24	1.02	.17	.51	1.02
1955: I	30.51	10.64	4.72	.87	.57	.19	.54	.68	1.11	.90	.17	.50	1.08
II	29.09	11.33	5.01	.94	.62	.19	.51	.74	1.13	.88	.21	.53	1.17
III	29.53	12.36	5.62	1.06	.67	.26	.56	.88	1.38	.97	.26	.64	1.22
IV	29.42	13.08	6.10	1.17	.76	.27	.66	.88	1.46	1.13	.27	.69	1.28
1956: I	33.65	13.76	6.49	1.28	.83	.28	.65	.96	1.73	1.37	.28	.76	1.39
II	35.46	15.00	7.18	1.47	.96	.32	.73	.98	1.84	1.43	.34	.89	1.37
III	36.22	16.01	7.74	1.56	.98	.45	.83	1.10	1.99	1.52	.41	.98	1.30
IV	36.83	16.37	8.13	1.69	1.08	.33	.83	1.13	1.96	1.45	.42	.95	1.25
1957: I	38.17	16.58	7.96	2.14	1.23	.32	.80	1.16	1.77	1.30	.45	.90	1.19
II	38.52	16.58	8.13	2.59	1.34	.34	.80	1.23	1.66	1.23	.51	.90	1.16
III	38.35	16.32	7.89	2.56	1.44	.33	.78	1.28	1.38	.80	.44	.75	1.11
IV	36.63	15.36	7.51	2.48	1.41	.26	.73	1.33	1.14	.64	.42	.70	1.14
1958: I	34.59	14.62	6.93	2.06	1.26	.26	.67	1.13	1.01	.68	.34	.78	1.28
II	31.43	12.65	5.72	1.66	1.03	.45	.63	.93	.85	.52	.28	.67	1.09
III	32.32	11.59	5.22	1.45	.94	.40	.56	.84	.81	.44	.28	.65	1.14
IV	31.11	11.09	4.81	1.22	.76	.35	.68	.78	.72	.38	.24	.65	1.06
1959: I	31.82	11.82	5.11	1.19	.75	.36	.59	.82	.84	.60	.23	.67	1.06
II	33.06	12.39	5.69	1.34	.88	.35	.62	1.00	.88	.60	.30	.67	1.15
III	34.51	13.00	5.99	1.03	.64	.30	.69	1.06	1.04	.66	.32	.85	1.30
IV	34.44	13.61	6.81	1.45	1.00	.34	.76	1.15	1.04	.64	.32	.68	1.29
1960: I	36.35	14.51	7.10	1.76	1.28	.31	.76	1.26	1.20	.73	.38	.76	1.42
II	37.93	15.55	7.41	1.90	1.42	.32	.83	1.29	1.21	.78	.33	.80	1.36
III	36.39	15.20	7.28	1.92	1.47	.31	.85	1.19	1.32	.85	.33	.78	1.13
IV	36.13	14.85	7.13	1.70	1.24	.33	1.04	1.28	1.35	.91	.36	.88	1.26
1961: I	35.83	14.19	6.61	1.62	1.00	.38	.94	1.27	1.04	.68	.30	.81	1.14
II	35.39	14.34	6.25	1.51	.90	.30	.93	1.21	1.09	.69	.30	.84	1.03
III	35.89	13.97	6.63	1.19	.75	.30	.93	1.10	1.09	.65	.27	.73	1.04
IV	37.13	14.74	6.46	1.20	.78	.28	.79	1.23	1.22	.74	.34	.82	1.20
1962: I	37.46	14.68	6.38	1.20	.78	.30	.78	1.25	1.23	.76	.31	.83	1.27
II	38.16	14.75	6.63	1.24	.79	.42	.77	1.32	1.20	.79	.33	.73	1.28
III	38.99	15.34	7.14	1.31	.80	.36	.81	1.37	1.41	.77	.45	.79	1.36
IV	38.68	15.36	6.98	1.36	.78	.41	.84	1.38	1.36	.82	.49	.72	1.44
1963: I	38.10	15.20	6.87	1.28	.75	.41	.83	1.38	1.47	.90	.43	.70	1.41
II	39.58	15.78	7.41	1.45	.84	.47	.83	1.38	1.56	1.00	.44	.68	1.54
III	41.82	16.79	7.73	1.62	.93	.52	.77	1.46	1.59	1.02	.45	.69	1.64
IV	43.04	16.90	7.85	1.69	.96	.44	.76	1.49	1.68	1.05	.48	.64	1.68
1964: I	45.27	18.09	8.61	2.01	1.33	.47	.83	1.68	1.76	1.12	.49	.74	1.68
II	46.20	18.53	9.05	2.04	1.31	.52	.84	1.75	1.88	1.28	.44	.74	1.80
III	47.12	19.37	9.29	2.16	1.40	.57	.85	1.84	2.02	1.48	.35	.71	1.71
IV	48.81	20.77	9.97	2.35	1.54	.62	.89	1.92	2.24	1.55	.40	.73	1.76
1965: I	50.70	21.56	10.33	2.31	1.42	.67	.92	1.99	2.44	1.55	.39	.81	1.81
II	53.31	22.51	10.96	2.35	1.56	.64	1.02	2.12	2.42	1.39	.38	.91	2.06
III	55.05	24.09	11.62	2.68	1.61	.74	1.20	2.37	2.68	1.93	.52	.98	2.05
IV	57.69	25.23	12.51	2.82	1.68	.86	1.29	2.67	2.87	1.86	.55	.90	2.21
1966: I	60.23	26.43	13.28	2.78	1.62	.87	1.44	2.78	2.80	1.87	.73	1.13	2.48
II	62.96	27.90	13.96	3.03	1.73	1.01	1.56	2.88	2.98	1.77	.96	1.04	2.54
III	64.31	28.74	14.15	2.98	1.71	.97	1.62	2.91	3.02	1.79	.99	1.15	2.50
IV	65.90	29.37	14.56	3.05	1.74	1.04	1.78	2.98	3.00	1.78	.96	1.25	2.49
1967: I	65.23	29.78	14.45	3.22	1.89	1.06	1.72	3.12	2.87	1.64	.98	1.11	2.41
II	66.80	29.16	14.25	3.33	1.96	1.12	1.69	3.12	2.76	1.61	.90	1.09	2.38
III	66.48	27.85	13.93	2.93	1.91	1.06	1.69	3.02	2.60	1.47	.88	.98	2.45
IV	66.38	27.51	13.71	3.19	1.99	1.02	1.70	2.98	2.65	1.47	.96	.88	2.76
1968: I	68.09	28.02	14.11	3.31	1.95	1.06	1.76	2.96	2.56	1.49	.83	.81	2.79
II	69.29	27.84	13.95	3.21	1.87	1.06	1.78	2.98	2.40	1.38	.85	.81	2.84
III	67.77	26.96	14.47	3.08	2.09	1.14	1.79	2.87	2.51	1.29	.90	.85	2.97
IV	69.05	28.70	14.39	3.39	2.07	1.20	1.78	2.90	2.44	1.33	.86	.86	2.96
1969: I	72.62	29.99	15.47	3.37	1.96	1.04	1.95	3.22	2.76	1.57	.85	1.02	3.24
II	73.94	31.16	15.93	3.31	1.91	1.12	2.04	3.34	2.73	1.56	.92	1.11	3.46
III	77.84	33.93	16.38	3.20	1.80	1.11	2.02	3.66	3.04	1.78	.92	1.14	3.50

1. Excludes agricultural business; real estate operators; medical, legal, educational, and cultural service; and nonprofit organizations.
2. Includes data not shown separately.
3. Includes guided missiles and space vehicles.
4. Includes fabricated metal, lumber, furniture, instrument, ordnance and miscellaneous except guided missiles and space vehicles.

Table 3.—Expenditures for New Plant and Equipment by U.S. Business,[1] Quarterly, Seasonally Adjusted at Annual Rates, 1947–69—Continued

[Billions of dollars]

	Manufacturing industries—Continued								Nonmanufacturing industries									
	Nondurable goods													Public utilities				
	Total	Food including beverage	Textile	Paper	Chemical	Petroleum	Rubber	Other nondurables[2]	Total	Mining	Railroad	Air transportation	Other transportation	Total	Electric	Gas and other	Communication	Commercial and other[3]
1947: I	4.77	0.88	0.43	0.88	1.11	1.44	0.17	0.86	18.13	0.49	0.71	0.13	1.05	1.28	0.82	0.47	1.26	5.18
II	4.82	.90	.56	.88	1.10	1.54	.17	.30	19.66	.61	.83	.21	1.15	1.43	.94	.50	1.02	5.26
III	5.41	.96	.56	.38	1.02	1.90	.17	.42	11.15	.74	.95	.15	1.13	1.63	1.05	.58	1.02	5.63
IV	5.61	1.04	.56	.40	1.02	1.88	.17	.44	11.53	.88	1.14	.14	1.16	1.74	1.23	.51	1.76	4.70
1948: I	6.17	1.04	.54	.40	1.02	2.60	.16	.41	11.56	.72	1.23	.12	1.14	2.15	1.68	.53	1.81	4.25
II	5.69	1.10	.58	.41	.98	2.08	.14	.41	12.10	1.02	1.23	.13	1.20	2.46	1.84	.61	1.77	4.29
III	5.42	1.19	.60	.38	.88	1.97	.12	.36	12.27	.85	1.49	.10	1.16	2.53	1.86	.63	1.76	4.46
IV	5.62	1.16	.60	.34	.93	2.12	.10	.37	13.06	1.07	1.59	.08	1.21	2.96	2.17	.73	1.64	4.49
1949: I	5.29	1.10	.58	.32	.70	2.05	.12	.41	12.47	1.13	1.64	.10	.83	3.04	2.17	.87	1.51	4.23
II	4.97	.92	.49	.30	.72	2.01	.12	.41	13.07	.82	1.52	.08	.79	3.18	2.17	.93	1.44	4.23
III	5.08	.88	.49	.27	.65	1.77	.12	.39	11.71	.82	1.41	.15	.77	3.06	2.16	.92	1.28	4.21
IV	4.05	.78	.35	.29	.61	1.55	.09	.38	11.29	.71	1.17	.18	.44	3.15	2.17	.98	1.14	4.32
1950: I	3.93	.70	.36	.30	.61	1.56	.13	.28	11.54	.76	1.03	.06	.96	3.04	2.04	.98	1.12	4.65
II	3.96	.71	.37	.32	.66	1.52	.10	.29	12.06	.77	1.16	.06	1.04	3.06	2.02	.96	1.12	4.94
III	4.64	.79	.46	.32	.81	1.69	.14	.43	13.33	.90	1.35	.11	1.16	3.28	2.12	1.13	1.13	5.48
IV	5.20	.94	.54	.37	.95	1.70	.15	.51	14.15	.95	1.22	.12	1.18	3.61	2.09	1.52	1.18	5.83
1951: I	5.44	1.02	.45	.41	1.09	1.85	.13	.44	14.27	.97	1.38	.11	1.24	3.48	2.19	1.24	1.26	5.86
II	5.08	.87	.54	.43	1.28	2.13	.17	.44	14.38	1.14	1.56	.18	1.22	3.54	2.26	1.28	1.32	5.78
III	5.04	.92	.48	.42	1.20	2.28	.17	.36	15.01	1.17	1.66	.14	1.33	3.67	2.28	1.39	1.32	5.65
IV	4.06	.88	.45	.41	1.33	2.68	.23	.39	14.57	1.18	1.78	.12	1.23	3.56	2.26	1.30	1.33	5.56
1952: I	4.15	.86	.42	.38	1.37	2.68	.20	.33	16.35	1.28	1.68	.28	1.20	3.58	2.65	1.13	1.56	5.85
II	4.50	.88	.41	.35	1.36	3.06	.21	.33	14.88	1.24	1.54	.21	1.32	3.65	2.61	1.05	1.53	6.49
III	5.09	.85	.37	.36	1.43	2.50	.20	.39	14.23	1.14	1.37	.21	1.10	3.53	2.73	.85	1.64	6.20
IV	6.15	.87	.37	.36	1.40	2.71	.16	.28	14.22	1.16	1.42	.25	1.23	3.89	2.97	1.05	1.68	5.26
1953: I	6.45	.84	.37	.36	1.44	2.75	.19	.33	15.87	1.19	1.45	.24	1.22	4.24	3.06	1.22	1.69	6.84
II	6.69	1.04	.36	.39	1.45	2.87	.21	.34	18.26	1.12	1.44	.22	1.25	4.42	3.18	1.26	1.82	6.10
III	6.54	.93	.25	.42	1.46	2.90	.20	.30	18.71	1.31	1.45	.21	1.40	4.45	3.27	1.18	1.80	6.10
IV	6.49	.88	.31	.44	1.37	2.96	.20	.32	18.41	1.28	1.38	.25	1.28	4.27	3.21	1.06	1.80	6.49
1954: I	6.55	.88	.30	.47	1.38	2.85	.19	.38	18.15	1.24	1.17	.33	1.28	4.22	3.15	1.08	1.81	6.12
II	6.32	.81	.30	.46	1.34	2.94	.18	.30	16.30	1.35	1.01	.22	1.20	4.22	3.10	1.12	1.85	6.28
III	6.23	.93	.29	.42	1.05	2.95	.17	.42	16.00	1.52	.84	.23	1.23	3.83	2.97	.86	1.83	6.73
IV	6.20	.90	.29	.46	1.08	2.96	.19	.43	15.50	1.26	.71	.21	1.23	3.78	2.97	.80	1.81	6.55
1955: I	5.82	.91	.28	.41	1.03	2.65	.18	.36	15.97	1.11	.84	.22	1.24	3.88	2.93	.82	1.90	6.87
II	6.82	.91	.30	.47	.90	3.11	.18	.45	16.76	1.26	.90	.30	1.29	3.92	2.94	.96	1.94	7.14
III	6.68	.85	.30	.55	1.40	3.23	.22	.49	18.25	1.35	1.03	.27	1.30	4.12	2.84	1.28	2.18	7.96
IV	6.95	.90	.36	.60	1.14	3.32	.22	.53	19.36	1.48	1.30	.24	1.36	4.14	2.75	1.40	2.38	8.49
1956: I	7.35	.94	.32	.76	1.27	2.85	.24	.46	20.09	1.57	1.37	.28	1.36	4.26	2.77	1.48	2.53	8.69
II	7.83	1.09	.33	.79	1.48	3.46	.27	.49	20.46	1.56	1.37	.30	1.31	4.42	2.94	1.48	2.76	8.65
III	8.26	1.12	.36	.80	1.54	3.57	.28	.52	20.21	1.53	1.31	.40	1.33	4.53	3.25	1.28	2.90	8.10
IV	8.25	1.14	.36	.87	1.56	3.47	.30	.55	20.46	1.59	1.41	.42	1.22	4.82	3.45	1.36	3.07	7.82
1957: I	8.72	1.19	.37	.86	1.60	3.92	.26	.53	21.60	1.78	1.39	.22	1.24	5.42	3.85	1.57	3.22	8.13
II	8.76	1.14	.34	.85	1.71	3.88	.27	.58	21.74	1.69	1.33	.32	1.32	5.51	3.80	1.71	3.24	7.82
III	8.93	1.13	.31	.80	1.82	3.86	.25	.60	21.83	1.70	1.74	.45	1.30	5.85	4.08	1.77	3.19	7.29
IV	8.54	1.15	.26	.71	1.75	3.66	.26	.54	20.76	1.60	1.47	.43	1.34	5.79	4.16	1.63	3.11	7.03
1958: I	7.58	1.08	.28	.67	1.61	3.17	.25	.70	19.91	1.53	1.28	.46	1.14	5.54	4.14	1.40	2.97	7.85
II	8.02	1.20	.29	.57	1.42	2.76	.22	.55	18.76	1.40	.88	.30	1.01	5.18	4.05	1.13	2.64	7.16
III	8.37	1.06	.30	.58	1.25	2.48	.20	.60	19.39	1.35	.68	.27	.97	5.59	3.92	1.68	2.65	7.69
IV	8.28	1.10	.23	.48	1.09	2.57	.20	.61	20.02	1.46	.67	.45	1.16	5.58	3.88	1.70	2.65	7.96
1959: I	8.71	1.19	.24	.54	1.10	2.76	.23	.65	20.19	1.34	.77	.54	1.28	5.48	3.66	1.82	2.56	8.12
II	8.79	1.20	.32	.56	1.21	2.79	.23	.62	20.68	2.82	1.05	.74	1.36	5.52	3.85	1.79	2.65	8.17
III	7.04	1.25	.28	.53	1.14	2.79	.20	.59	21.61	1.87	1.22	.94	1.38	4.96	2.66	1.42	2.79	8.33
IV	7.30	1.22	.26	.70	1.31	2.79	.28	.53	20.32	1.40	.92	.90	1.30	4.91	2.64	1.30	2.85	8.54
1960: I	7.42	1.22	.27	.72	1.42	2.71	.32	.64	21.57	1.82	1.23	.76	1.32	5.46	3.66	1.81	3.08	8.71
II	8.14	1.26	.26	.77	1.55	3.04	.32	.69	22.36	1.90	1.18	.74	1.42	5.21	3.64	1.57	3.20	9.22
III	7.97	1.28	.29	.81	1.63	2.79	.32	.65	21.19	1.81	1.12	.58	1.29	5.12	3.68	1.65	3.36	8.43
IV	7.82	1.25	.26	.77	1.55	2.95	.28	.53	21.16	1.20	1.12	.56	1.28	5.21	3.63	1.68	3.34	8.84
1961: I	7.65	1.18	.25	.72	1.45	2.90	.29	.64	20.84	1.32	.91	.66	1.04	5.06	3.55	1.51	3.31	8.51
II	8.09	1.16	.24	.68	1.62	3.08	.39	.64	21.04	1.33	.88	.65	1.10	5.03	3.69	1.42	3.30	8.80
III	7.96	1.23	.22	.60	1.60	3.00	.39	.41	21.92	1.28	.80	.78	1.32	4.99	3.60	1.39	3.38	9.38
IV	8.28	1.17	.22	.59	1.65	3.04	.36	.70	22.38	1.34	.76	.78	1.42	4.96	3.46	1.50	3.52	9.60
1962: I	8.30	1.13	.24	.61	1.64	3.19	.32	.63	23.78	1.44	.86	.55	1.71	4.83	3.61	1.32	3.98	9.46
II	8.12	1.12	.23	.54	1.54	3.01	.35	.69	23.40	1.39	1.15	.70	2.48	4.87	3.67	1.33	3.94	9.80
III	8.23	1.41	.40	.66	1.54	3.28	.34	.60	24.68	1.45	1.15	.51	1.55	5.00	3.60	1.50	3.90	10.29
IV	8.41	1.56	.40	.78	1.55	3.06	.32	.76	23.23	1.32	.90	.80	1.53	4.87	3.52	1.34	3.82	10.38
1963: I	8.23	1.42	.43	.68	1.78	3.00	.30	.71	23.91	1.31	1.09	.28	1.57	4.96	3.66	1.24	3.84	10.15
II	8.37	1.42	.44	.71	1.70	3.05	.32	.71	24.80	1.21	1.16	.34	1.70	4.88	3.59	1.29	3.96	10.66
III	9.07	1.46	.42	.77	1.74	3.20	.45	.84	25.04	1.24	1.32	.39	1.48	5.17	3.82	1.35	4.16	11.27
IV	9.04	1.56	.42	.74	1.76	3.31	.39	.86	26.14	1.31	1.48	.65	1.54	5.12	3.80	1.32	4.27	11.75
1964: I	9.45	1.78	.44	.84	1.79	3.44	.44	.83	27.35	1.32	1.60	.90	1.52	5.29	3.83	1.46	4.44	12.22
II	9.78	1.69	.48	.89	1.88	3.62	.42	.75	27.43	1.31	1.61	.92	1.60	5.47	3.93	1.54	4.61	12.04
III	10.06	1.75	.54	.96	2.37	3.55	.42	.66	27.75	1.35	1.75	1.05	1.56	5.58	4.02	1.61	4.70	11.84
IV	10.60	1.85	.62	1.16	2.29	3.72	.47	.76	28.04	1.33	1.62	1.26	1.48	5.65	4.00	1.66	4.66	12.00
1965: I	11.20	1.85	.58	1.17	2.58	3.78	.54	.87	29.12	1.40	1.94	1.11	1.58	5.84	4.26	1.69	4.93	12.31
II	11.55	1.82	.57	1.17	2.66	3.88	.55	.89	30.30	1.48	1.95	1.15	1.68	5.92	4.28	1.67	5.20	13.49
III	12.17	1.83	.73	1.24	2.75	4.11	.56	.98	31.08	1.46	2.04	1.42	1.72	6.10	4.42	1.68	5.42	12.91
IV	12.70	2.00	.77	1.28	2.89	4.29	.56	.93	32.46	1.66	2.01	1.21	1.72	6.28	4.78	1.50	5.60	13.84
1966: I	13.14	2.05	.81	1.28	2.93	4.52	.53	.86	34.33	1.83	1.97	1.61	1.67	7.06	4.97	2.09	5.77	14.17
II	13.91	2.09	.89	1.41	3.19	4.64	.56	1.06	35.06	1.69	2.60	1.61	1.71	7.21	5.21	2.00	5.97	14.09
III	14.68	2.14	.83	1.45	3.36	4.77	.57	1.38	35.57	1.62	2.40	1.72	1.63	7.74	5.64	2.09	6.04	14.42
IV	14.78	2.12	.77	1.45	3.51	4.88	.64	1.34	38.58	1.60	2.47	1.81	1.58	7.88	5.63	2.04	6.26	15.13
1967: I	15.32	2.22	.79	1.73	3.50	5.04	.63	1.42	35.46	1.55	2.13	1.57	1.47	7.96	6.01	1.98	6.19	14.57
II	14.93	2.14	.70	1.64	3.21	4.22	.54	1.35	38.45	1.52	1.79	2.43	1.38	8.61	5.48	2.04	6.30	14.53
III	13.96	1.97	.64	1.49	2.98	4.58	.62	1.28	37.62	1.76	1.72	2.30	1.96	8.86	6.36	1.99	6.49	14.90
IV	13.80	2.03	.61	1.39	2.67	4.20	.77	1.21	38.16	1.78	1.82	2.79	1.41	9.46	7.47	1.99	6.67	14.84
1968: I	13.91	2.04	.56	1.24	2.91	4.17	.82	1.16	40.87	1.50	1.69	2.89	1.49	10.03	7.76	2.32	6.83	15.87
II	14.33	2.14	.52	1.40	2.93	4.16	.88	1.30	38.45	1.66	1.49	1.98	1.49	10.24	7.84	2.60	6.42	15.17
III	14.40	2.40	.53	1.28	2.78	4.32	1.06	1.25	38.91	1.57	1.23	2.09	1.65	9.82	7.50	2.32	6.67	15.22
IV	14.33	2.28	.53	1.37	2.72	4.32	1.11	1.08	40.35	1.53	1.34	2.07	1.75	10.53	7.94	2.59	7.34	14.91
1969: I	14.62	2.45	.59	1.42	3.00	5.04	1.07	.94	42.48	1.54	1.66	2.33	1.67	11.52	8.62	2.90	7.76	15.52
II	15.18	2.28	.65	1.53	2.95	5.41	1.12	1.11	43.78	1.65	1.78	2.22	1.66	11.58	8.71	2.87	7.92	15.67
III	14.72	2.66	.69	1.52	3.19	5.99	1.19	1.24	44.50	1.89	2.00	2.22	1.65	11.48	8.98	2.50	8.71	16.78

1. Includes apparel, tobacco, leather and printing-publishing.
2. Includes trade, service, construction, finance and insurance.

NOTE.—Details may not add to totals because of rounding.

Sources: U.S. Department of Commerce, Office of Business Economics, and the Securities and Exchange Commission.

the previous series.[1] The choice of 1958 and 1963 was dictated by the availability of Censuses for those years. Second, annual estimates for other years in the 1947–1968 period were interpolated and extrapolated using data from several sources; the major source was the existing survey data on capital expenditures that had been collected over time by the Securities

1. Methodology for the old series is described in two articles in the SURVEY OF CURRENT BUSINESS: "Capital Expenditures by Manufacturing Industries in the Postwar Period" in the December 1961 issue and "Capital Expenditures by Nonmanufacturing Industries" in the August 1962 issue.

Table 4.—Starts of Plant and Equipment Projects, Manufacturing and Public Utilities, Quarterly 1963–69

[Billions of dollars]

Year and quarter	Manufacturing													Public utilities
		Durable goods						Nondurable goods						
	Total[1]	Total[1]	Primary metals	Electrical machinery	Machinery except electrical	Transportation equipment	Stone, clay, and glass	Total[1]	Food including beverage	Textile	Paper	Chemical	Petroleum	
Not adjusted for seasonal variation														
1963: I	5.01	2.61	0.61	0.21	0.71	0.60	0.16	2.40	0.49	0.09	0.32	0.36	0.58	1.35
II	4.42	2.21	.43	.21	.29	.67	.18	2.21	.36	.11	.22	.41	.84	1.58
III	4.19	1.91	.56	.18	.25	.38	.17	2.29	.37	.07	.29	.51	.78	.89
IV	4.64	2.06	.42	.19	.33	.53	.15	2.57	.51	.18	.22	.39	.93	1.84
Year	18.26	8.79	2.01	.80	1.58	2.18	.66	9.47	1.73	.45	1.06	1.67	3.13	5.65
1964: I	5.74	2.79	.48	.22	.77	.46	.24	2.96	.39	.14	.16	.74	1.18	2.04
II	5.79	2.56	.71	.28	.31	.65	.25	3.23	.46	.14	.44	.67	1.12	1.29
III	5.51	2.66	.59	.30	.32	.58	.20	2.85	.42	.13	.30	.77	1.04	1.18
IV	5.99	2.81	.80	.25	.58	.82	.24	3.18	.46	.17	.37	.66	1.25	1.22
Year	23.03	10.82	2.60	1.05	1.98	2.51	.93	12.21	1.74	.58	1.08	2.84	4.59	5.65
1965: I	7.42	3.96	.77	.33	1.16	.76	.34	3.45	.48	.20	.50	.82	.99	2.88
II	6.70	3.46	.53	.37	.35	1.11	.26	3.25	.58	.22	.32	.81	1.08	1.60
III	6.68	3.16	.69	.31	.59	.62	.47	3.52	.73	.21	.30	.72	1.18	1.82
IV	7.87	4.16	1.01	.42	.70	.88	.41	3.72	.51	.22	.44	.78	1.30	2.58
Year	28.67	14.66	3.00	1.43	2.81	3.37	1.48	13.98	2.30	.85	1.56	3.13	4.55	8.88
1966: I	7.98	4.56	.85	.66	1.47	.80	.12	3.42	.61	.23	.37	.80	1.02	2.04
II	7.13	3.75	.98	.40	.40	.94	.31	3.38	.48	.18	.30	1.08	1.01	1.95
III	6.84	3.20	.78	.41	.42	.76	.20	3.64	.45	.18	.29	1.01	1.00	2.06
IV	8.13	4.44	1.54	.59	.89	.58	.20	3.69	.50	.20	.28	.88	1.19	2.50
Year	30.10	15.95	4.15	2.06	3.18	3.08	.84	14.14	2.04	.80	1.24	3.77	4.22	8.55
1967: I	6.43	3.15	.76	.44	.82	.49	.13	3.28	.44	.11	.30	.69	1.31	4.57
II	7.83	3.47	.96	.34	.67	.71	.41	4.36	.46	.14	.69	1.09	1.48	3.00
III	5.76	2.48	.36	.35	.46	.47	.14	3.26	.67	.22	.38	.44	1.28	2.42
IV	6.45	3.27	.73	.41	.64	.57	.18	3.18	.43	.16	.15	.26	1.62	2.67
Year	26.48	12.43	2.81	1.54	2.58	2.24	.86	14.08	2.00	.63	1.52	2.48	5.69	12.65
1968: I	6.92	3.38	.81	.42	.62	.60	.22	3.55	.51	.18	.51	.70	1.20	4.11
II	7.12	3.52	.83	.53	.59	.80	.25	3.60	.61	.14	.43	.60	1.17	3.00
III	7.40	3.62	.90	.38	.61	.78	.26	3.78	.54	.19	.19	.64	1.81	1.97
IV	9.05	4.94	.78	.58	.88	.73	1.19	4.11	.66	.18	.30	.94	1.40	3.73
Year	30.50	15.46	3.31	1.91	2.70	2.90	1.92	15.05	2.32	.69	1.43	2.88	5.57	12.81
1969: I	8.46	4.18	.76	.41	.69	.73	.34	4.28	.59	.14	.40	.88	1.65	3.30
II	8.65	4.24	.69	.66	.95	.87	.17	4.41	.92	.19	.35	1.06	1.35	2.54
III	8.03	4.00	.75	.76	.77	.55	.28	4.03	.60	.14	.40	1.03	1.15	3.50
Adjusted for seasonal variation at annual rates														
1963: I	18.49	9.14	2.37	.80	1.59	2.58	.61	9.35	2.01	.35	1.09	1.32	3.65	5.19
II	18.06	9.01	1.72	.81	1.92	2.18	.67	9.05	1.47	.47	.96	1.66	3.43	6.66
III	18.43	9.03	2.47	.80	1.48	1.74	.70	9.40	1.51	.32	1.21	1.59	2.29	5.88
IV	18.14	8.14	1.44	.78	1.58	2.17	.65	10.00	1.94	.64	.42	1.68	3.61	6.44
1964: I	21.51	9.87	1.94	.94	1.78	2.04	1.03	11.64	1.58	.60	.67	2.51	4.50	5.75
II	23.54	10.34	2.96	1.08	2.03	2.16	.85	13.20	1.60	.54	1.65	2.49	4.65	5.79
III	24.50	12.79	3.16	1.34	1.84	3.75	.84	11.71	1.70	.65	.62	3.04	4.41	4.32
IV	23.33	10.74	2.56	1.06	2.37	2.26	.90	12.59	1.79	.59	1.18	3.13	4.56	4.82
1965: I	27.67	14.06	3.10	1.27	2.75	3.29	1.36	13.61	1.94	.81	1.69	3.15	4.05	8.09
II	26.46	13.58	3.26	1.45	2.89	3.49	.96	12.88	2.32	.91	1.26	2.99	4.30	6.78
III	29.74	15.14	3.68	1.37	2.26	2.79	2.03	14.60	3.00	.97	1.25	3.00	4.69	7.31
IV	30.73	15.98	3.37	1.62	2.78	3.88	1.66	14.75	3.01	.79	1.06	3.50	4.76	10.72
1966: I	29.93	16.18	3.44	2.60	3.42	3.44	.60	13.75	3.48	1.00	1.36	3.12	4.22	8.47
II	28.28	15.14	3.81	1.56	2.64	3.30	1.15	13.14	1.89	.74	.73	3.65	4.96	8.95
III	30.07	14.85	3.90	1.88	2.23	3.24	.69	14.21	1.78	.76	1.67	4.42	4.24	11.28
IV	30.77	16.18	4.07	2.24	3.45	2.16	.78	14.59	2.05	.70	1.29	3.96	4.63	10.40
1967: I	24.93	11.65	3.05	1.69	2.09	2.19	.59	13.28	1.78	.48	1.08	2.74	5.49	12.84
II	30.51	14.64	3.78	1.36	3.56	2.39	.78	15.87	2.16	.67	2.45	3.58	6.02	15.90
III	24.43	11.88	1.84	1.84	3.47	1.96	.66	12.54	2.23	.47	1.57	2.00	6.37	14.08
IV	24.26	12.32	2.54	1.49	2.43	2.54	.64	12.04	1.70	.58	.85	1.16	6.55	11.09
1968: I	27.21	12.92	3.29	1.68	1.64	2.63	.97	14.29	2.62	.45	1.96	2.60	6.04	11.45
II	28.65	14.72	2.61	2.10	3.68	2.65	.89	13.93	2.32	.60	1.50	2.88	4.64	14.00
III	33.17	17.20	6.22	1.56	3.06	3.29	1.23	15.97	2.29	.75	.77	2.58	7.60	10.49
IV	34.80	18.34	2.60	1.57	3.33	3.24	4.21	16.46	2.65	.58	1.44	4.11	5.12	16.79
1969: I	33.65	16.10	2.96	2.34	2.39	3.22	1.55	17.55	2.38	.41	1.40	3.50	7.94	14.81
II	35.24	18.30	2.75	2.72	3.88	2.99	.58	17.04	3.50	.77	1.24	4.38	5.37	11.60
III	36.29	19.03	3.96	3.44	3.84	2.47	1.34	17.26	2.77	.56	1.96	4.97	4.94	18.63

1. Includes data not shown separately.

NOTE.—Details may not add to totals because of rounding.
Sources: U.S. Department of Commerce, Office of Business Economics, and the Securities and Exchange Commission.

and Exchange Commission and the Interstate Commerce Commission (from companies registered with, or under the jurisdiction of those agencies) and by the Office of Business Economics from a sample of other companies. Third, quarterly estimates were derived from the revised annual estimates by using the existing quarterly survey data.

There was an extensive retabulation of the OBE–SEC sample data. All reports that had originally been received too late for use in the regular survey estimates were included in the revised tabulations. The sample was stratified by industry, by legal form of organization, and by size within the corporate sector. Companies were classified in

Table 5.—Carryover of Expenditures to be Made on Plant and Equipment Projects, Manufacturing and Public Utilities, 1962–69

[Billions of dollars]

End of quarter	Manufacturing													Public utilities
	Total [1]	Durable goods						Nondurable goods						
		Total [1]	Primary metals	Electrical machinery	Machinery except electrical	Transportation equipment	Stone, clay, and glass	Total [1]	Food, including beverage	Textile	Paper	Chemical	Petroleum	
	Not adjusted for seasonal variation													
1962: December	7.63	3.76	1.68	0.46	0.21	0.71	0.30	3.76	0.50	0.16	0.43	1.21	1.06	4.43
1963: March	9.23	4.88	2.00	.45	.32	1.00	.28	4.34	.68	.16	.60	1.13	1.29	5.35
June	9.64	5.19	2.07	.45	.50	1.27	.30	4.44	.67	.15	.66	1.16	1.26	5.59
September	9.69	5.21	2.21	.45	.49	1.25	.28	4.48	.61	.13	.76	1.26	1.34	4.88
December	9.56	5.03	2.16	.41	.39	1.36	.28	4.53	.70	.18	.76	1.15	1.39	4.80
1964: March	11.38	5.96	2.28	.46	.80	1.41	.37	5.42	.71	.24	.74	1.50	1.82	5.30
June	12.09	6.23	2.44	.55	.68	1.66	.42	5.15	.73	.25	.96	1.63	2.04	5.69
September	12.13	6.63	2.50	.62	.56	1.81	.45	5.50	.79	.24	.92	1.93	2.19	5.32
December	13.25	6.87	2.69	.66	.58	1.82	.46	6.38	.72	.24	.86	1.93	2.39	4.96
1965: March	15.20	8.28	2.88	.74	1.30	2.06	.62	7.70	.82	.30	1.11	2.17	2.55	5.68
June	16.98	8.94	3.13	.86	1.15	2.54	.66	8.02	.92	.38	1.18	2.30	2.85	6.67
September	17.73	9.21	3.18	.89	1.15	2.47	.90	8.51	1.29	.41	1.22	2.36	2.76	6.33
December	18.48	9.76	3.36	.91	1.09	2.65	1.04	8.72	1.18	.42	1.20	2.30	2.87	7.12
1966: March	20.09	11.44	3.62	1.29	1.94	2.85	.96	8.24	1.24	.48	1.29	2.45	2.58	8.74
June	20.79	11.69	3.85	1.30	1.62	3.04	.97	9.10	1.27	.52	1.32	2.72	2.76	8.85
September	20.55	11.48	3.89	1.32	1.38	3.03	.88	9.12	1.18	.40	1.16	2.92	2.87	8.32
December	20.38	11.66	4.04	1.38	1.39	2.73	.72	8.72	1.18	.40	1.04	2.81	2.39	9.24
1967: March	20.29	11.67	4.02	1.45	1.50	2.69	.51	8.62	1.08	.33	.93	2.73	2.55	12.11
June	20.52	11.58	4.77	1.58	1.28	2.61	.57	8.94	1.06	.29	1.29	2.99	2.80	12.93
September	19.77	10.73	4.32	1.32	1.24	2.41	.48	9.05	1.13	.24	1.16	2.71	2.84	13.86
December	18.49	10.04	4.11	1.22	1.13	2.25	.42	8.45	1.04	.24	.98	2.23	2.90	13.89
1968: March	19.35	10.23	4.28	1.27	1.08	2.31	.45	8.92	1.19	.23	1.23	2.27	2.84	15.11
June	19.41	10.49	4.06	1.36	1.06	2.50	.48	8.92	1.14	.23	1.28	2.32	2.84	15.49
September	19.75	10.63	4.19	1.26	.95	2.68	.54	9.13	1.07	.29	1.14	2.19	2.93	14.98
December	20.16	10.84	4.27	1.25	1.00	2.70	.90	9.32	1.15	.30	1.07	2.37	2.92	15.74
1969: March	22.04	11.65	4.03	1.48	1.16	2.84	1.01	10.39	1.20	.30	1.28	2.53	3.76	18.68
June	22.28	11.91	3.99	1.54	1.23	3.03	.90	10.36	1.48	.38	1.18	2.56	3.79	18.25
September	22.75	11.88	3.85	1.90	1.18	2.90	.91	10.87	1.49	.30	1.18	2.15	3.47	18.76
	Adjusted for seasonal variation													
1962: December	7.35	3.90	1.69	.43	.27	.74	.31	3.88	.51	.17	.45	1.27	1.07	4.89
1963: March	8.88	4.60	1.96	.43	.24	1.01	.28	4.17	.66	.15	.57	1.17	1.21	4.94
June	9.34	4.90	2.03	.42	.49	1.26	.28	4.34	.67	.16	.62	1.14	1.21	5.39
September	9.66	5.23	2.20	.43	.50	1.20	.28	4.42	.63	.13	.74	1.20	1.33	5.07
December	9.97	5.30	2.25	.44	.48	1.32	.29	4.66	.72	.18	.79	1.22	1.41	5.15
1964: March	10.33	5.62	2.34	.44	.62	1.39	.38	5.21	.66	.22	.72	1.49	1.74	5.27
June	12.00	5.94	2.44	.50	.59	1.46	.38	6.06	.78	.24	.96	1.63	1.96	5.85
September	13.28	6.81	2.69	.61	.69	1.69	.42	6.47	.71	.25	.92	1.85	2.20	5.55
December	13.92	7.01	2.74	.64	.78	1.90	.45	6.92	.78	.24	.93	2.03	2.41	5.36
1965: March	15.44	7.92	2.95	.73	.83	2.11	.42	7.52	.80	.28	1.08	2.17	2.45	5.88
June	16.44	8.63	3.18	.83	.94	2.38	.43	7.81	.92	.38	1.19	2.23	2.65	6.14
September	17.37	9.43	3.45	.87	1.16	2.37	.68	8.46	1.22	.42	1.11	2.29	2.75	6.44
December	19.26	10.28	3.50	.96	1.19	2.70	1.07	8.97	1.22	.43	1.38	2.44	2.89	7.48
1966: March	20.12	11.00	3.76	1.24	1.41	2.86	.91	9.12	1.23	.47	1.30	2.49	2.82	7.93
June	20.22	11.29	3.95	1.24	1.34	2.92	.94	8.93	1.28	.44	1.12	2.61	2.66	8.26
September	20.53	11.46	4.13	1.31	1.17	2.97	.87	9.09	1.19	.42	1.13	2.59	2.84	9.15
December	20.00	11.55	4.65	1.42	1.29	2.76	.75	9.04	1.18	.40	1.11	2.39	2.42	9.83
1967: March	19.66	11.13	4.64	1.41	1.03	2.57	.61	8.53	1.06	.32	.95	2.56	2.58	10.97
June	20.15	11.20	4.75	1.32	1.14	2.45	.55	8.96	1.07	.29	1.15	2.89	2.75	12.52
September	19.57	10.80	4.40	1.31	1.23	2.33	.47	8.88	1.13	.25	1.16	2.65	2.83	13.26
December	18.78	10.34	4.24	1.25	1.19	2.29	.45	8.44	1.05	.24	1.02	2.27	2.99	13.77
1968: March	18.58	10.05	4.22	1.22	.96	2.31	.47	8.53	1.04	.21	1.18	2.24	2.68	14.11
June	18.78	10.35	4.07	1.30	1.13	2.37	.46	8.43	1.11	.23	1.21	2.15	2.76	15.06
September	19.35	11.05	4.50	1.26	1.16	2.56	.56	8.32	1.06	.29	1.09	2.09	3.33	15.22
December	21.36	12.02	4.80	1.27	1.27	2.76	1.40	9.35	1.23	.29	1.11	2.44	3.28	16.51
1969: March	22.29	12.17	4.19	1.39	1.07	2.88	1.64	10.12	1.22	.30	1.17	2.56	3.78	17.33
June	23.34	12.75	4.06	1.53	1.20	2.92	1.49	10.59	1.52	.34	1.20	2.80	3.77	17.37
September	24.16	13.39	4.24	1.96	1.24	2.83	1.46	10.77	1.54	.30	1.18	3.13	3.51	18.21

1. Includes data not shown separately.

NOTE.—Details may not add to totals because of rounding.

Sources: U.S. Department of Commerce, Office of Business Economics, and the Securities and Exchange Commission.

1948 and these classifications were maintained through 1957; for the 1958 to 1963 estimates, companies were classified according to their 1958 activity and size and from 1964 forward according to their 1964 activity and size.

Industrial classification for the series is based on the *Standard Industrial Classification Manuals* for 1948 and 1957. Estimates were prepared usually for two-digit groups and in a few instances for three-digit groups. Each company is classified in an industry category according to its primary activity and all expenditures by the company are counted as expenditures in the industry in which the company is classified.

Adjustment of 1948 estimates

The 1948 estimates for the previous series were derived primarily from universe assets data from the Internal Revenue Service in conjunction with assets and expenditure data from the sample, supplemented by some Census information. These estimates were reexamined and three types of adjustments were made. For selected manufacturing industries, where single unit firms were predominant and where the OBE–SEC samples were weak, estimates of company capital expenditures were derived by use of establishment data from the 1947 Census of Manufactures and the 1949 Survey of Manufactures. The OBE–SEC sample data were used as interpolators for 1948. The industries were lumber, furniture, fabricated metals, instruments, apparel, leather, printing-publishing, and miscellaneous. This procedure resulted in a $250 million reduction in the 1948 estimate. Data from the Annual Surveys of Manufactures were used to extrapolate expenditures for these industries through 1966.

Second, an error resulting in an overstatement of expenditures for motor vehicles by retail firms was corrected. Finally, estimates for the construction and finance industries were completely reworked, using data from various sources. This also resulted in a reduction of the 1948 estimate. For the commercial group as a whole—trade, finance, construction, insurance, and services—capital expenditures in 1948 were reduced $1 billion.

1958 and 1963 estimates

Complete data on plant and equipment expenditures for benchmarking the universe estimates from the survey sample were available only for manufacturing and mining companies in 1958 and 1963. In those years, the Bureau of the Census collected plant and equipment expenditure data from the universe of companies in those industries. For other industries "quasi-benchmark" estimates were constructed by using the ratio of capital spending of a sample of firms to some measure—most frequently gross capital assets or sales—that was available for the universe of all firms in an industry.

In some industries—airlines, public utilities, communications, and railroads—the survey sample includes companies accounting for 90 percent or more of the industry's total capital expenditures. Calculation of the 1958 and 1963 "quasi-benchmarks" for these industries therefore required little inflation of the sample data. At the other extreme, considerable inflation was necessary for the construction industry. The methodology and sources used in preparing the 1958 and 1963 estimates for individual industries are discussed below.

Mining and manufacturing. Capital expenditure data on a company basis were compiled by the Bureau of the Census for 1958 and 1963 and published in Table 4A of Part I of the 1958 and 1963 editions of *Enterprise Statistics*. These figures are used as the benchmark data for all manufacturing and mining industries.

The changes between 1958 and 1963 in the company-based data were compared with information from several sources: the changes in establishment-based data from the 1958 and 1963 Censuses of Minerals and Manufactures; the capital asset and depreciation data from the Internal Revenue Service and the Quarterly Financial Reports of Manufacturing Corporations published by the Federal Trade Commission and Securities and Exchange Commission; and the data from the OBE–SEC sample. As a result of this review, an adjustment was made in the 1958 benchmark for the nonelectrical machinery industry to correct an apparent undercoverage in that year.

Public utilities, communications, nonrail transportation, and insurance. Universe capital expenditures for these groups (except oil pipelines, which are classified in the nonrail transportation group) were estimated from capital expenditure data reported to the Securities and Exchange Commission and to the Interstate Commerce Commission (by transportation companies subject to its jurisdiction). The sample data were inflated by applying the ratio between universe corporate gross capital assets reported by the IRS in *Statistics of Income* and gross captial assets of the sample. When the firms not in the sample were known to be predominantly small, the inflation was done separately for different assets-size classes.

The sample data on expenditures by airlines were supplemented by data on leased equipment obtained from annual 10–K Reports filed with the SEC and from reports to stockholders.

The public utility and communications industries were considered to be entirely corporate in structure. For nonrail passenger and freight transportation, noncorporate capital expenditures were estimated by applying the ratio between capital expenditures and operating revenues for small carriers in the ICC's sample to the IRS data on business receipts of all unincorporated firms.

Data on expenditures by oil pipeline companies were taken from annual reports submitted to the ICC by pipeline companies. To eliminate duplication, companies were excluded if they were majority-owned subsidiaries of firms in another industry that report on a fully consolidated basis; the parent firms were primarily integrated petroleum refiners.

Railroads. Universe expenditure data were obtained from the ICC for Class I and II Railroads, Lessor Companies, and certain "Private Car Lines." Expenditures for private cars by companies whose principal line of business is in another industry, such as chemicals or petroleum products, are included in the figures for those industries. Estimates of expenditures by Switching and Terminal Companies were not available directly, but were derived from ICC data on these companies' property and depreciation accounts.

Retail and wholesale trade; services. The 1958 and 1963 estimates for trade and for services were based on Census data. The Censuses of Business provides universe capital expenditures on an establishment basis for retail trade, merchant wholesalers, and selected services; data for these groups on a company basis for a few large employee-size classes, are in *Enterprise Statistics* (Volume I, Table 8A). These sources also provide universe totals of sales and employment for both establishments and companies. It may be noted that the OBE–SEC series covers all wholesalers (merchant wholesalers as well as other types). The OBE–SEC series for services covers only business and personal services; professional services are excluded. This is identical to the coverage of the Census.

For each of the three groups, four separate capital expenditures estimates were computed—two based on universe sales and two based on universe employment. The first of the four procedures adjusted the capital expenditures on a company basis by using the ratio between universe sales on a company basis and to universe sales on an establishment basis. The second procedure was similar but utilized universe employment data.

The third and fourth procedures—again utilizing first sales and then employment as universe measures—involved making separate estimates for multiunit and single unit companies. The technique, using sales as an example, was as follows: *Enterprise Statistics* provided universe capital expenditure figures for the largest size-classes of multiunit companies, as well as universe sales for multiunit companies and single unit companies. The universe estimate of capital expenditures by single unit companies was derived by applying the ratio of capital expenditures to sales (on an establishment basis) to universe sales of single unit companies. Expenditure/sales ratios were then computed for each size group of multiunit companies for which expenditure figures were published. From the pattern of these ratios, which tended to decrease by size, ratios for the missing size groups were estimated and applied to the universe sales of those groups to yield expenditures. Expenditure figures for multiunit companies derived in this manner were then added to those for single unit companies to yield overall expenditure estimates.

The results of all these estimation procedures for the years between 1958 and 1963 were then examined for consistency among themselves and for consistency with trends shown in other series such as capital consumption allowances. In most instances, differences in the various estimates were small. For retail trade, the estimate derived by the single unit and multiunit company procedure using company sales as the universe measure was accepted as the final figure. For wholesale trade, estimates based on the inflation of establishment expenditures by universe sales were used since expenditures data were available only on an establishment basis for petroleum bulk stations, assemblers of farm products and other nonmerchant wholesalers. The same technique was also accepted for services where the company expenditure data for the large size groups appeared to be nonrepresentative of other groups.

Construction. Capital expenditure estimates for the contract construction industry are the least reliable. The sample data are relatively weak and there is a dearth of comprehensive data from external sources. The 1958 estimate of universe expenditures was made by summing separate estimates for corporate and noncorporate companies. Capital assets data were available for companies in the OBE–SEC sample for 1959 but not for 1958. Corporate expenditures for 1959 were derived by applying the ratios between expenditures and capital assets for companies in the OBE–SEC sample to corporate universe data on capital assets from the IRS. The estimates were calculated separately for each of five asset classes since expenditure/asset ratios in this industry vary markedly for firms of different sizes. The 1959 estimate was extrapolated back to 1958 by use of IRS data on capital assets and depreciation. Capital expenditures by noncorporate firms in 1958 were derived by applying the ratio of capital expenditures to sales for the smallest size corporations in the OBE–SEC sample, to IRS universe sales by noncorporate companies.

The estimate for 1963 for all firms, corporate and noncorporate, was prepared from IRS data on the cost of property acquired for investment tax credit. These data, as published, include used equipment and exclude all structures as well as equipment with lives of under 4 years. Estimates for the excluded equipment were calculated from information in the Treasury Department's *Depreciation Guidelines*. The equipment figures were then inflated to an estimate of total capital expenditures through use of data from companies in the OBE–SEC sample that report expenditures for equipment separately from expenditures for structures.

Finance. Expenditures data were available only for companies from the OBE–SEC sample. Information on banks was obtained from the Board of Governors of the Federal Reserve System and on savings and loan associations from the Federal Deposit Insurance Corporation. These sources provided data on capital assets for companies in the OBE–SEC sample for the years 1959 and 1963, as well as universe assets for banks and savings and loan associations.

For these years, the universe capital assets were multiplied by the sample's capital expenditures-assets ratio to obtain the capital expenditures estimates for all such institutions. To cover other types of financial firms, a small further inflation was made using fixed asset and depreciation data from the IRS's *Statistics of Income*.

The estimate for 1958 was extrapolated from the 1959 estimate by use of 1958 and 1959 net capital assets and depreciation data.

Estimates for 1947, 1949–57, 1964 and later

Estimates for years other than the base years 1948, 1958, and 1963 were obtained by extrapolation and interpolation. Several different interpolators-extrapolators from various sources were developed for each industry and the best was selected for final use. The "best" was determined for each industry, insofar as possible, on the basis of the quality of the data used for the extrapolator and the appropriatiness of the extrapolator for the industry in question.

The principal interpolator-extrapola-

tor used was the year-to-year percent change in expenditures reported by companies in the OBE–SEC sample. For the noncorporate sector, where the samples for most industries are inadequate, the percent change in capital expenditures of the smallest size-group of corporations was gnerally used as an interpolator-extrapolator. In many industries, the noncorporate sector has been showing neither growth nor decline, according to IRS compilations on sales by sole proprietorships and partnerships. In these industries, expenditure estimates between base years have been moved by straight line interpolation and have been held constant since 1963.

The method described above was used for mining, manufacturing (except the industries indicated in the earlier section on the derivation of the 1948 estimates), public utilities, railroads, nonrail transportation, communications, trade, and services for the entire period covered by the revision, and for construction and finance from 1963 forward.

For corporations in the construction industry, the interpolator for use between 1948 and 1958 was calculated from IRS data on the change in net depreciable assets plus depreciation, weighted 0.8, and construction machinery shipments weighted 0.2; the interpolator from 1958 to 1963 was calculated from the same two series, weighted 0.3 and 0.2, respectively, and percent changes from the OBE–SEC sample, weighted 0.5. For the noncorporate sector in construction, the interpolator was capital consumption allowances by noncorporate firms. For finance, Federal Reserve data on the change in net depreciable assets plus depreciation were used as the interpolator-extrapolator for the entire period 1948–1963.

Quarterly estimates

For all industries, quarterly estimates were calculated using quarterly movements of the OBE–SEC sample data to interpolate the annual levels. All quarterly data were seasonally adjusted using the Bureau of the Census X–11 procedure.

Carryover and starts

Carryover data reported by manufacturers and public utilities firms were retabulated from the start of the series at the end of the fourth quarter 1962. In manufacturing, the sample was stratified by industry by assets-size groups. No size stratification was made for public utilities.

Because of a significant growth in the response rate to the new survey, particularly in the earlier quarters of the series, and because some respondents report their carryover data on an irregular basis, a technique was adopted to obtain improved continuity in the series while making maximum use of all returns in a given survey. The procedure adopted may be summarized as follows:

(a) The carryover estimate for the end of the fourth quarter of 1963 was computed by multiplying the ratio of carryover to capital expenditures for all firms in the sample, by universe expenditures as estimated in the revised series. This estimate was then adopted as the base period estimate for the entire carryover series.

(b) A first approximation of the carryover level at the end of the first quarter of 1964 for each industry was computed in the same manner as in (a) above, namely, by inflating the maximum sample's carryover to the universe.

(c) A second approximation of the carryover level at the end of the first quarter of 1964 for each industry was computed by extrapolating the previous quarter's figure by the quarter-to-quarter percent change in carryover reported by a constant sample of firms.

(d) The final carryover estimate for the first quarter of 1964 was constructed by averaging the first approximation, with a weight of 0.2, with the second approximation, with a weight of 0.8.

(e) Carryover estimates for the 1964 second quarter and for all subsequent quarters to date were computed in the same manner as in steps (b) through (d) above, with the estimate of change for any quarter always applied to the final or "composite" estimate for the preceding quarter. This procedure was also used in carrying the series back to the fourth quarter of 1962.

Starts were calculated by adding expenditures for a quarter to the change in carryover during the quarter. Experience in the initial pilot work for the carryover survey indicated that firms usually report in the carryover figures any adjustments with respect to costs, volume, specifications, etc., in any projects underway; however, such adjustments would generally not be reflected in the direct reports of starts figures. It was decided that more accurate data on the total costs of starts could be achieved through use of the change in the carryover data combined with actual expenditures, rather than through the direct collection of data on starts.

The data show little seasonal pattern in carryover, but very substantial seasonal movements in starts. Therefore, the starts estimates are seasonally adjusted directly (by the Bureau of the Census X–11 program). Seasonally adjusted changes in carryover are computed by subtracting seasonally adjusted expenditures from seasonally adjusted starts. These changes are added cumulatively to a seasonally adjusted figure for the level carryover in the fourth quarter of 1962, to get quarterly estimates of the seasonally adjusted level of carryover. The seasonally adjusted level figure for the fourth quarter of 1962 was obtained by direct seasonal adjustment of the carryover data.

Sample design and coverage

The OBE–SEC sample was designed for complete coverage of all companies with gross assets of $50 million or more, and a random selection of companies with less than $50 million of assets. The same general sampling procedures were used in the initial selection in the mid-1940's, and in 1954, and 1963 when coverage of the survey was enlarged. Since 1963, the sample has been supplemented only by companies newly registered with the SEC.

There are 10,250 firms in the sample. The response rate has varied between 70 percent and 75 percent. In 1963, the responding companies accounted for 59 percent of total capital expenditures in the United States; the corresponding percentages were 70 for manufacturing and 52 for nonmanufacturing.

The survey coverage is highest in in industries characterized by large firms—which account for a large share of total capital spending. The ac-

companing table shows the coverage of the sample in each industry in 1963. Coverage percentages ranged above 90 in airlines, communications, public utilities, and railroads, and in motor vehicle, iron and steel, chemical, and tobacco manufacturing. Coverage was below 25 percent in trade, services, construction, and in furniture, and apparel manufacturing.

Comparison with national accounts data

This section discusses the relationship of the OBE–SEC series on plant and equipment expenditures to related components of the national income and product accounts: nonresidential structures and producers' durable equipment.

The OBE–SEC plant and equipment expenditure series differs from the nonresidential fixed investment component of GNP in coverage and method of estimation. The OBE–SEC expenditure series is less comprehensive in that it does not include the capital expenditures of farm enterprises, professional persons, nonprofit institutions, and real estate operators. It also excludes, while the GNP component includes, oil well drilling costs charged to current expense, expenditures for passenger cars for business purposes by salaried workers who receive reimbursement for the use of their cars, net purchases of used capital goods from government, and dealers' margins on the purchase of used capital. The OBE–SEC expenditures are not reduced, as is the GNP nonresidential fixed investment, by receipts from the sales of used capital to foreigners or to dealers in scrap materials.

While the OBE–SEC plant and equipment expenditure series is based primarily on sample survey results, the GNP nonresidential investment series is constructed in a largely indirect manner from a variety of sources. The structures component is obtained by the use of Bureau of the Census construction data plus estimates of oil well drilling costs, commissions on the transfer of used property, and net purchases of structures from government. The Census construction estimates for some components are derived from company accounting data, but the most important part of these estimates is based on a sample of construction projects. In the OBE–SEC plant and equipment survey, the reporting is by the purchaser for all of his capital expenditures. Thus, there can be differences between the two series in timing of reported expenditures, and there is no assurance that the areas covered by both series are reported with the same degree of completeness.

The equipment component of the GNP series, like the structures component, is derived in an indirect manner. The principal method used for most years through 1962 is the commodity-flow technique. This consists of (1) analyzing Bureau of Census estimates of total manufacturing shipments to obtain an estimate of the proportion that consisted of finished producers' durable goods for private, domestic use, (2) adding distributive costs to manufacturers' sales value to arrive at an estimate of the costs of the equipment to the purchasers, and (3) adding business imports of producers' durable goods. In addition, for all years, estimates of net purchases of used assets from government and dealers' margins on sales of used equipment are added and exports of used equipment and sales of scrapped equipment are subtracted. For years since 1958, the markups for distribution costs have been maintained at essentially constant percentages. For the period since 1962, the commodity flow estimates have been averaged with an equipment series derived by subtracting the appropriate construction data from the OBE–SEC plant and equipment series, plus some further adjustments, particularly for farm equipment and motor vehicles.

Percentage of Total Expenditures for New Plant and Equipment, Accounted for by Sample Companies, 1963

Total business	59
Manufacturing	70
Durable goods	69
Iron and steel	96
Nonferrous metals	80
Electrical machinery	76
Machinery except elec.	80
Motor vehicles	90
Aircraft	79
Transportation equipment except motor vehicle and aircraft	68
Stone, clay, and glass	52
Other durable	42
Fabricated metal	59
Lumber	30
Furniture	19
Instruments	61
Ordnance and miscellaneous	27
Nondurable goods	71
Food including beverage	41
Textile	57
Paper	62
Chemical	89
Petroleum and coal	87
Rubber	68
Other nondurable	32
Tobacco	92
Apparel	13
Printing and publishing	26
Leather	40
Nonmanufacturing	52
Mining	31
Railroad	93
Air transportation	95
Other transportation	40
Public utilities	94
Electric	96
Gas	87
Communications	91
Commercial	16
Wholesale	12
Retail	20
Services	10
Construction	6
Finance and insurance	30

NOTE.—Based on 1963 Sample Dollar Aggregate and Revised 1963 Universe Estimate.

While it would be desirable to have only one series on business investment, both statistical and definitional considerations necessitate maintenance of two series at this time. The requirements of the gross national product and input-output accounts are not now satisfied by the OBE–SEC series for several reasons. As has been noted, the latter series differs both in definition and industry coverage from investment as measured in the national accounts. Sufficient information is not available to quantify investment in the uncovered industries and the other items that would be required to adjust the OBE–SEC series for national accounts purposes. Instead, the investment component of the national accounts must rely heavily on the commodity flow method, which has been briefly described. This method also provides commodity detail that is required for the national accounts, and is not available from the OBE–SEC series. Furthermore, the commodity flow method is used to estimate the personal consumption expenditures component of the GNP, and its use in the estimation of producers' durable equipment as well improves the statistical consistency of the national accounts estimates. The OBE–SEC series, on the other hand, is essential as a base for the investment expectations series and for the series on the carryover and starts of investment projects. In addition, the OBE–SEC data provide estimates of investment by purchasing industry, information that is not contained in the national accounts.